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PAPER TRADE JOURNAL

JULY 27, 1944

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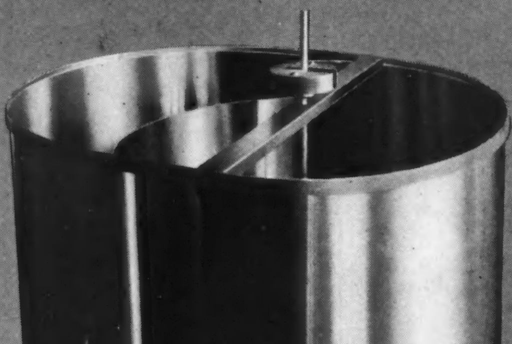

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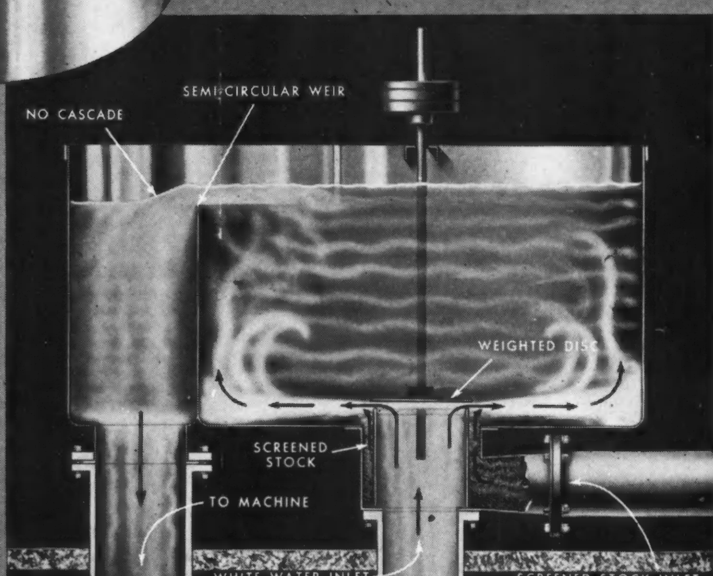

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Vol. 119, No. 4

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July 27, 1944

OPA Changes Pulpwood Prices in the South

Regulation Sets Initial Ceiling Price of $10.80 A Cord On Veneer Cores and Fixes A Price of $8.60 A Cord On Pine Pulpwood Delivered F.O.B. Barges Only — Extra For Truckage Is Allowed.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 26, 1944—Three changes in the regulation establishing ceiling prices on pulpwood produced in the southern States were announced by the Office of Price Administration today.

The changes, which become effective July 24, 1944, follow:

First Regulation on Veneer Cores

1. Veneer cores are brought under the regulation for the first time and are given the same ceiling price as that applicable to peeled southern hardwood. This is $10.80 a cord, f.o.b. freight cars. Previously these cores came under the General Maximum Price Regulation, with the highest March 1942 price of each producer operating as the ceiling. The establishment of a specific dollar-and-cent ceiling is expected to abolish confusion existing in certain places as to just what the ceiling price is, and it is also expected to promote the flow of these cores into the normal channels of trade.

Changes in Pulpwood Regulation

2. When pulpwood is delivered by truck or similar vehicle to a consumer's mill in Tuscaloosa, Alabama, a differential of $1.25 per cord may be added to the f.o.b. car maximum price. The differential generally allowed in the southern States for truck-delivered wood is that paid by the mill in January and February 1943. In those particular months, Tuscaloosa had no particular differential supplies by truck. Today's action is expected to correct that situation.

Sets Prices on Barge Deliveries

3. The $8.60 per cord ceiling for pine pulpwood, f.o.b. barges is made applicable only when hauled by barges from landings constructed or put into general use before June 1, 1944. When hauled by barges from landings constructed or put into general use after June 1, 1944, the ceiling price is $7.60, which is the same as the f.o.b. car ceiling on pine. Today's action is taken to prevent the dislocation of normal pulpwood operations in this area by the building of landings for the express purpose of getting the $1.00 differential heretofore allowed on all pine pulpwood sold f.o.b. barges.

Limits Paper Board Weights and Uses

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 26, 1944—Measures to conserve approximately 73,000 tons of box board a year were made effective today by the issuance of amendments to Limitation Order L-239, which restricts the manufacture of folding and set-up boxes and eliminates unnecessary types, the War Production Board announced today.

To save paper and paper board, now in short supply, new restrictions require that both folding or collapsible boxes and set-up or rigid containers be manufactured without unnecessary decorations and other features, yet assuring good serviceable packaging, WPB Paperboard Division officials said.

Among the types of commercial boxes affected by the conservation measures are boxes for packaging laundry, tobacco, candy, cereal, crackers, toys, games and butter; pails for ice cream and foods, and display boxes.

Display boxes may no longer be made if their manufacture requires extra paper board for the display feature. Set and combination boxes are also prohibited unless for some special purpose approved by WPB.

In general, restrictions are placed on the use of unnecessarily heavy paper board and on the manufacture of packages larger than required by the product, or employing projecting edges, extra cards, padded tops, etc., Paper Board Division officials said.

The additional restrictions on the manufacture of food boxes limit the sizes of containers for butter, oleomargarine, lard, shortening, ice cream and similar boxes and pails, as well as the weight and kind of paper board used.

Cereal boxes holding less than four ounces of breakfast food are prohibited. Cracker and baked goods are further restricted as to weights of board that may be used.

Weights of paper board permitted in the production of candy boxes were reduced by approximately 17% below previous maximum weights, officials said. Similarly, the weight of board for 200-cigarette cartons has been reduced, as was the weight of boxes for packing 2½ ounces of smoking tobacco. Boxes intended to hold from 21 to 199 cigarettes are prohibited.

This eliminates the present flat paper package of 50 cigarettes.

Restrictions on the manufacture of laundry boxes prevent the further use of full telescope boxes and limit the weight of stock that may be used. The packaging of toys and games is now limited to 60% of the paper board tonnage used in 1942 for that purpose.

See Paper Securities in Strong Position

Rapid Growth of Canadian Industry and Extensive Raw Materials Are Important Assets In Continued Expansion—Pulpwood Prices Are Changed—Asks Cut In Woods Labor Until Fall—Other News.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., July 24, 1944—During the recent rise in prices on the stock market considerable attention has been concentrated on the securities of the paper companies, the leading issues of which have shown market appreciation in value. This has brought out the report that operators of investment trusts who make a particular study of the condition of different companies now incline to the view that the great majority of the Canadian paper companies are in the strongest position in their history. Thus the Wood Grundy Corporation, discussing the reason for Canada's dominant position in newsprint and the importance of the industry in the country's economy, says:

Development of Natural Resources

"The tremendous growth of the pulp and paper industry in Canada is the logical commercial development of natural resources. Its raw materials are based on extensive forest areas and vast water powers within easy access of each other. Its manufactured products have a ready export market in the United States, the world's largest consumer of newsprint. These circumstances, together with labor and capital, have enabled Canada to achieve world dominance in the industry."

Holding that Canadian investors even yet do not fully appreciate the improved position of the industry, the Financial Times, of Montreal, says that this is due to the fact that both this generation and the previous one had a very unfortunate experience with most of their holdings in different paper companies through over-expansion and cut-throat competition. Another factor is that traders do not find it easy to figure how well Canadian pulp and paper companies are likely to do in the after-war period, when the mills of Scandinavian companies will again be able to invade the markets of the United States. It is this market which has been the principal factor in the larger earnings of Canadian companies, particularly those which have been specializing in various kinds of sulphite and other products that can be handled to advantage in the manufacture of different specialties.

Great New Field Has Been Opened

On the other hand, a great new field has been opened for the use of pulp products in many lines of industry, and the Financial Times points out that the mere fact that Canadian companies have been able to improve their position to such an extent creates the belief that they will be better able than ever before to meet Scandinavian competition, and in addition they have acquired an experience in many lines that will stand them in good stead in holding a great number of customers they have made in different parts of the United States. This view is held by leaders in the industry, who base their belief on the extensive research and study which the industry as a whole has been giving to new methods and processes during the past few years in preparation for post-war developments and new uses for pulp products.

Pulpwood Prices Changed

The Timber Administrator for the Prices Board has announced that all the pulpwood price ceiling orders have been amended to allow payment of higher prices when the wood is purchased by a mill through established dealers or brokers. Earlier orders of the Board fixed maximum prices which could be paid for pulpwood by pulp and paper companies at delivery points. The prices covered all charges, including commissions. The new orders make no change in maximum prices, but provide that dealers may add a charge of 40 cents per cord for handling rough pulpwood and 60 cents per cord for peeled pulpwood. Brokers' commissions are 75 cents and $1 per cord for rough and peeled pulpwood respectively. It is explained that the changes are expected to stimulate production by farmers and settlers through help given by brokers and dealers in financing and arranging transportation, and are expected to also help in maintaining fair distribution of wood among the mills. It is not anticipated that the overall cost of pulpwood to the mills will be greatly affected, since the amount of purchased pulpwood is only 20 per cent of the total used. Provinces affected are Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, and Saskatchewan.

Asks Cut in Woods Labor

National Selective Service in Ottawa has appealed for the discontinuance of woods cutting operations wherever possible until the end of September to ease the employment situation for the benefit of harvesting and railway maintenance work and the production of base metals, particularly nickel and aluminum. In a letter to the pulp and paper industry, Arthur MacNamara, director of National Selective Service, says that there is no desire to curtail necessary summer operations concerning lumber and woods work, but the suggestion relates mainly to cutting in the woods. "You are no doubt aware," he remarked, "that the manpower shortage has become so acute that drastic steps have to be taken to meet essential labor requirements." He added that Selective Service had found it necessary to cancel the permits of company canvassers who have been recruiting woods labor.

Sale of New Brunswick Timber Holdings

From Fredericton, N. B., it is announced that two large timber holdings in central New Brunswick have changed hands. From the King Lumber Company, of Chipman, N. B., E. C. Atkinson, of Fredericton, and W. J. Brewer, of Douglas, have purchased Crown licenses and freehold land involving upwards of 100,000 acres. Their plan is to carry on pulpwood operations in the area, which is situated on the Salmon River and Newcastle Creek in Sunbury, Queens, Westmorland and Kent counties. From the James H. Holmes Company, of Doaktown, W. R. MacKinnon has purchased timber limits approximating 10,000 acres on which it is proposed to carry on logging and pulpwood operations.

Paper Man Sees Industry Forging Ahead

Greater Prosperity In Post-War Era Than In Past Is Possible States Thomas B. McCabe In Address—All-Union Shop Agreement Defeated — Recover Pulpwood Barge — Other Industrial News.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., July 24, 1944—Industry is able to create a greater prosperity in the post-war era than this country has ever known, Thomas B. McCabe, president of the Scott Paper Company, parent firm of the Marinette Paper Company and trustee of the Committee for Economic Development, declared in an address July 17 before a joint meeting of service clubs of Marinette, Wis., and Menominee, Mich., at Hotel Marinette, in the former city.

He outlined both the problems and the favorable aspects to be encountered, as the committee sees them. The former, he said, include cancellation of government contracts, employment of 10 million servicemen and 10 million from war plants; government owned property worth 20 billions; dislocation of population; labor relationships; taxation; free enterprise; national deficit; relaxation of govenrment control, and small businesses.

Favoring post-war prosperity: Savings of 165 billion dollars; liquidation of installment credits; surplus funds of states and municipalities; dollar exchange, and the work of the United Nations conference on finance at Bretton Woods, N. H.

"The one objective of CED from the beginning," he said, "is to assist industry to obtain maximum productivity and employment in the post-war period. CED is made up of industrialists whose avowed purpose is to aid private enterprise. Industry has demonstrated the ability to do a mammoth job.

"We need, however, statesmen who realize their responsibilities. We need a disposition on the part of labor to select leaders of a high level who will realize their responsibilities in the post-war period.

"Government must inspire the game after setting the rules for the game in the post-war period. Government must have an understanding and appreciation of the problems."

Mr. McCabe also outlined the progress of the Scott Paper Company and the Marinette Paper Company. He said 600 are now employed with a weekly payroll of $22,000, or $1,250,000 a year. The output of the mill is valued at $6,400,000 a year. He said production at Marinette after the war depends upon whether there is the equipment and manpower to carry on post-war work, and whether the unit there can produce as well as other plants of the parent company.

All incumbent directors and officers were reelected at the annual meetings of stockholders and directors of the Nekoosa-Edwards Paper Company on Wednesday, July 19, in the company's offices at Port Edwards, Wis. The company's operations during the last year and plans for the future were discussed in the report of John E. Alexander, president and general manager.

Directors besides Mr. Alexander are Guy O. Babcock, who is vice president; C. A. Jasperson, secretary-treasurer; J. B. Nash, L. M. Hanks, Judson G. Rosebush and A. S. Puelicher. The directors reappointed Harry Deyo as assistant secretary-treasurer.

All-Union Shop Pact Defeated

The all-union shop agreement sought by the Brotherhood of Sulphite Paper Makers local (AFL) was defeated in the election July 20 at Lakeview mill of Kimberly-Clark Corporation at Neenah, Wis. A majority voted in favor of the proposal, but not the required 75% of the workers.

There are 1,823 eligible voters in the mill, and the record showed 1,506 votes cast, with 1,029 favoring the all-union shop agreement, and 473 opposing it. The election was held under the supervision of the Wisconsin Employment Relations Board.

The Lakeview mill employes voted in favor of the brotherhood as the sole bargaining agent in an election in March, under supervision of the National Labor Relations Board.

Recover Big Pulpwood Barge

A 352-foot barge, owned by the Filer and Fiber Company of Manistique, Mich., and recently refitted for carrying pulpwood, was brought into port at Manitowoc, Wis., Thursday night, July 20, after breaking away from its tow tug in a heavy sea on Lake Michigan the previous evening. It was towed in by the tug Cumberland of the United States Engineering department, after a heavy pounding. Seven men of the crew remained on the craft, without ill effects.

The barge, a converted carferry, broke loose from the tug Tipperary of Manistique, Mich., about 17 miles off the Two Rivers, Wis., harbor. Coast guard boats from Two Rivers and Sheboygan, Wis., stood by. Several attempts to get a line to the barge failed until early Thursday night. The Tipperary returned to Manitowoc in the meantime to replenish its coal supply.

F. J. Sensenbrenner Reelected

F. J. Sensenbrenner, chairman of the board of Kimberly-Clark Corporation, Neenah, Wis., has been reelected as a trustee of Northwestern Mutual Life Insurance Company, Milwaukee, Wis.

Richard Brody on New Business Committee

Richard Brady of the Whiting-Plover Paper Company, Stevens Point, Wis., is a member of a city promotion committee named to invite new industries to settle there.

H. G. Schanche Made Director

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 24, 1944—H. G. Schanche, woods manager, Brown Company, Berlin, N. H., has been elected one of the directors of the newly organized New England Forestry Foundation. As New England "is forced to import 75 per cent of the forest products required by its industries," the organization has been formed to encourage better forestry practices in the region and increase its wood production.

Tight Paper Supply May Continue All Year

Chicago Market Comment Concerned Over Heavy Government Requirements Which Will Limit Civilian Supply In Fourth Quarter —Consider Result of Higher Waste Paper Ceilings—Other News.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., July 24, 1944—Chicago paper circles, commenting on the recent increase in prices of the home pick-up variety of waste paper, were much more concerned over continued requests from Government for more and more of the paper that formerly went into civilian channels. According to local reports, the pulp allocation program is extensive enough to make predictions for a less tense fourth quarter a bit premature. Some slight increases in production as reported by outlets were cause for only minor encouragement as local paper leaders continued to feel the manpower situation as easily the most critical of all.

Comment centered around the recent victory of the WPB in announcing resumption of civilian goods production by small plants with available manpower and materials as compared to the program of holding up all civilian production until everybody was through with war production and could get an "even start." Paper trade officials here were wondering what the industry would do with more civilian goods—with reference to containers, packing, etc.—unless something was done to speed up pulp production. There were indications that even while the goods might be available at factories, the paper industry in its present condition, would be hard pressed to provide enough protective covering to ship to retail shelves.

Folding box manufacturers and jobbers in Chicago are planning to exploit the OPA boost in waste paper ceilings as much as possible by forceful salvage collection programs in conjunction with the Newspaper Salvage Committee. Krafts were reported even more scarce this week while book and cover representatives reported more and more of civilian supply "potentialities" to government users.

Consider Effect of Waste Price Boost

There is a considerable amount of uncertainty about the real effects of the new waste paper order which increases the ceilings on loose paper sold by homes, offices and stores by two dollars a ton. At least that is the reaction in the Chicago territory even while the industry is applauding the idea of providing more incentive and encouragement to get the waste paper and pack in properly for paper mill use. Those who had received copies of the regulation—and a goodly percentage had not, said that the plan would have to be thoroughly tried and possibly two weeks would have to pass before it could be determined that the boost "would really work."

Some who made comment were more pessimistic, saying that the black market in waste paper in this locality had already seen prices paid as high and higher than the current OPA boost. "How will this help," said one merchant, "if these black markets have existed for a long time and these prices are actually current through such sources."

Others expressed need for clarification of the regulations pertaining to envelope and magazine cuttings in particular. One was quoted as saying that "the magazine specifications are confusing. It would be easy for handlers of magazine paper to become violators under the new rulings, because there is little magazine paper in existence which has not a certain percentage of ground wood. The present ruling specifically states that no magazine stock shall exceed 5 per cent ground wood."

Added comment indicated that some felt the baling of the envelope cuttings would cause the most unfavorable reaction due to the discrepance in the price of baling and of bundling. Those who expressed themselves on this point were reported to believe that the increases granted would tend to eliminate mill competition, make it more difficult for mills to by-pass the dealers and that the dealers would be able to cope with the direct buying situations which to this point have genuinely handicapped them, it is said.

For the most part, the theory was applauded just as the philosophy of production as compared to the philosophy of continuing scarcity has been upheld by the entire trade. It was just a case of wanting to know more and of criticizing certain of the specifications—not the general idea.

Salesmen Discuss Pulp Allocation

A general discussion of the pulp allocation program occupied the western division of the Salesmen's Association of the Paper Industry at its regular Monday luncheon at the Hotel Sherman on July 17. Though more than pleased with the speaking programs which have been a feature of recent weeks, the SAPEYES were reported as willing to sit down and have a "general sob" over the rather bleak outlook as far as civilian supplies are concerned. It was generally reported that the mills were being called upon by the Government for more and more paper. Ed Edwards of the Howard Paper Company, assistant vice president of the division, presided in the absence of Pat Patterson of Flambeau Paper Company, vice president.

Ease Minds of Out-of-State Shippers

On June 21 the Circuit Court of Sangamon County, Illinois, virtually eliminated the last fears of outside-the-state corporations with reference to collection of state sales taxes on goods shipped into Illinois from across the various state lines. On the above date the Court held unconstitutional an amendment passed by the 1943 legislature which had been approved to legalize previous efforts to tax shipments regardless of origin or source and on the basis that the solicitation took place within the State of Illinois. The amendment, when approved, caused considerable consternation among certain of the jobber representatives within the State of Illinois and meetings of the Salesmen's Association of the Paper Industry, the Chicago Paper Association and other groups were held to give the matter careful study and interpretation. Now, however, the decision based on the new Ex-Cello case, allays these fears and taxes merchandise only when it is sold from and offered for sale and sold within the confines of the state. It is reported

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are a great comfort to overworked, undermanned papermakers. Tucked away out of sight though they may be, they're in there pitching every minute the felt is making its rounds — keeping it continuously clean, fresh and absorbent without mid-week shut-downs . . . Make sure your Conditioners are always at their best. Check with us if there's any question about it. The service they perform is too important to trifle with, these days.

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Obituary

Quincy P. Emery

Quincy P. Emery died at his home in Old Greenwich, Conn., on July 19, after an illness of many months. Since 1907 he was identified with the paper industry in various capacities. He began his career in the mill of the Richmond Paper Company, Seattle, Wash., and when that company was absorbed by the Zellerbach Paper Company he was employed as branch manager for Zellerbach in Vancouver.

Mr. Emery set up his own business in July, 1914 in Seattle with a branch office in San Francisco. In 1919 he returned East and became manager for Stone & Andrew and later went with the Kennelly Paper Company. In 1930 he started his own business in New York and conducted it successfully until July 1, 1941 when he joined The Stevens-Nelson Paper Corporation to promote the sale of domestic papers, becoming a vice-president of that company.

Mr. Emery's hobby was fine printing of which he was an enthusiastic collector. He was a graduate of the Massachusetts Institute of Technology, a member of the American Institute of Graphic Arts in which he held many offices, a member of the N. Y. Club of Printing House Craftsmen and a director of the Advertising Club of New York.

Edmund H. Lunken

Edmund H. Lunken, chairman of the board of The Lunkenheimer Company, Cincinnati, Ohio, valve manufacturers, died Wednesday, July 19, at his summer home in Michigan, as the result of a cerebral hemorrhage.

Mr. Lunken, who was 83 years old, had been active and in good health until last winter, when he suffered an attack of influenza.

The son of Frederick Lunkenheimer, founder of The Lunkenheimer Company, he was born in Cincinnati and educated in the Cincinnati schools. At the age of 16 he entered his father's business, which had been established in 1862. Upon the death of his father in 1889, he assumed leadership of the company and remained its senior officer until his death. In 1892, he legally changed his surname to Lunken, but did not change the name of the company.

In September 1928, realizing Cincinnati's need for a municipal airport, Mr. Lunken purchased 204 acres in the Little Miami River Valley and donated this ground to the city for airport purposes. Around this nucleus the present Lunken Airport was built.

Henry L. Samson

Henry L. Samson died at his home July 13 after a serious illness. Mr. Samson joined the sales organization of the Zellerbach Paper Company on the West Coast back in 1913. In 1915, he pioneered Interfolded Paper Towels in the East for National Paper Products Company and within a few years was made general manager of its mill at Carthage, New York. In 1920, after leaving National Paper Products Company, he went into a partnership manufacturing toys out of compressed pulp. Three years later, he became general manager of Domestic Mills Paper Company and in 1928, he joined the Hoberg Paper Mills in a sales capacity. Since 1933, he was associated with Crown Zellerbach Corporation, National Paper Products Company Division, New York office, in the capacity of mill and sales coordinator.

George G. Bell

George G. Bell, aged 76, of Daytona Beach, Fla., formerly of Larchmont, N. Y., died at his home in Florida on July 14. He had been in failing health for some time and the immediate cause of death was a heart attack.

Mr. Bell was associated with W. F. Etherington & Co., Inc., wholesale paper dealers, New York for more than fifty years, and for many years prior to his retirement on December 31, 1939 was treasurer of the company.

Funeral services were conducted in Daytona Beach and the burial was in Beechwood Cemetery, New Rochelle, N. Y.

Surviving him are his wife, two daughters and a granddaughter.

Harvie J. Robertson

Harvie J. Robertson since January 25, 1923 manager of The Gardner-Richardson Co., New York sales offices, died suddenly on July 5, 1944. Mr. Robertson had spent his entire business life in the paper board and folding paper box industry starting in 1909 with the Phoenix Paper Company succeeded by the Fort Orange Paper Company.

In February 1921 he was connected with the Robert Gair Company until he took over the duties as manager of the New York office of The Gardner and Harvey Company, since 1932 The Gardner-Richardson Company .

Samuel L. Hammer

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 24, 1944—Funeral services were held during the week for Samuel L. Hammer, retired paper manufacturer, who died on Wednesday last in Atlantic City.

Mr. Hammer, who was 83, resided at 2031 Delancey Place. For many years he was president of the Columbia Paper Company. He was also a member of the Union League and the Philadelphia Country Club. Three daughters, Mrs. John C. Bole of Dayton, Ohio; Mrs. Carol M. Bell, Merion, and Mrs. Henry L. Rapp, Plymouth, Mass., survive. Interment was private.

G. N. Miller Goes to Glatfelter Co.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 24, 1944—Announcement is made by the P. H. Glatfelter Co., Spring Grove, Pa., of the acquisition to its engineering department of George N. Miller, former engineer at the Riverside and Dan River Cotton Mills, Danville, Va. Mr. Miller assumed his new duties on July 15; he will be in charge of power and steam.

This position was formerly held by E. F. Troop, who has become personnel manager of Glatfelter Company.

Turkey Starts New Paper Mill

A new paper mill began operating during the first quarter of 1944 at Izmut, Turkey. Annual production will include 700 tons of cigarette paper and 12,000 tons of newsprint and printing paper, and it is reported that the plant is to be equipped with machinery for the manufacture of 3,000 tons of thin wrapping paper per year, according to a report to the Department of Commerce at Washington, D. C.

This is the second paper mill to be established at Izmut and it is stated that the combined production of the two plants will be about 25,000 tons of paper.

Liquid Chlorine

During the tense stress of wartime conditions, the constant manufacturing control and rigid supervision of Diamond Liquid Chlorine are more important than ever before. The resulting high standard of purity, close uniformity and dependability makes Diamond Liquid Chlorine first choice among industrial engineers everywhere.

CHLORINE

DIAMOND ALKALI COMPANY . . . PITTSBURGH, PA.

and Everywhere

FINANCIAL NEWS

New York Stock Exchange

High, Low and Last for Week Ending July 22, 1944

STOCKS

	High	Low	Last
A. P. W.	3¾	3⅝	3⅝
Armstrong Cork Co.	44¼	42⅝	42⅝
Celotex Corp.	14¾	13⅞	13⅞
Celotex Corp., pf	18⅝	18	18⅛
Certain-Teed Products Corp.	8⅝	6½	6½
Certain-Teed Products Corp., pf.	110	92	92¾
Champion Paper & Fibre Co.	29	26	26
Champion Paper & Fibre Co., pf.	113	112¾	113
Congoleum Nairn Co.	27⅛	26	26
Container Corp. of America	26¾	25⅝	25¾
Continental-Diamond Fibre Co.	12⅜	11	11¾
Crown-Zellerbach Co.	19⅛	18⅛	18⅜
Crown-Zellerbach Co., pf.	102	101½	102
Dixie Cup Co.	18⅛	17½	17⅞
Dixie Cup Co., A.	46½	45½	46½
Flintkote Co.	25⅛	22¾	23⅛
Flintkote Co., pf.	...	...	...
Robert Gair	5⅛	4½	4⅝
Robert Gair, pf.	16½	16¼	16⅜
International Paper Co.	19⅜	17½	18
International Paper Co., pf.	85	83	83
Johns-Manville Corp.	98¼	94	94
Johns-Manville Corp., pf.	...	...	...
Kimberly-Clark Corp.	38¼	38¼	38¼
Mac Andrews & Forbes	29⅞	29¼	29¼
Mac Andrews & Forbes, pf.	...	...	...
Masonite Corp.	45½	43¼	43¾
Mead Corp.	11½	10¾	10¾
Mead Corp., pf. A-6%	96	95	95
Mead Corp., pf. B-5½%	...	...	...
National Container Corp.	21⅜	18½	21⅛
Paraffine Companies, Inc.	57	55½	55½
Paraffine Companies, Inc., pf.	...	...	...
Rayonier, Inc.	17⅛	15¾	16
Rayonier, Inc., pf.	33¼	32⅝	33
Ruberoid Co.	33⅞	31¾	31¾
Scott Paper Co.	42½	42	42
Scott Paper Co., pf.	112	112	112
Sutherland Paper Co.	33	32⅞	32⅞
Union Bag & Paper Corp.	12⅜	11½	11⅝
United Paperboard Co.	6⅜	5¾	5⅞
U. S. Gypsum Co.	81½	79¾	79¾
U. S. Gypsum Co., pf.	179½	178	179½
West Virginia Pulp & Paper Co.	26¾	25¾	26
West Virginia Pulp & Paper Co., pf.	107¾	107¾	107¾

BONDS

Abitibi Pulp & Paper Co. 5s '53	83⅛	82½	82½
Celotex Corp. 3¾s '55	...	...	...
Certain-Teed Products Corp. 5½s '48	102	101¾	101¾
International Paper Co. 6s '55	...	...	...
Champion Paper & Fibre Co. 4¾s '50	...	...	...
International Paper Co. 5s '47	104½	104¼	104¼
Mead Corp. 3½s '53	...	...	...
West Virginia Pulp & Paper Co. 3s '54	...	...	...

New York Curb Exchange

High, Low and Last for Week Ending July 22, 1944

STOCKS

	High	Low	Last
Great Northern Paper Co.	35⅜	34	34
Hummel-Rose Fibre Corp.	7⅛	6⅛	6¼
St. Regis Paper Co.	6½	5⅜	5¾
St. Regis Paper Co., pf.	...	...	...
Taggart Corp.	6	6	6

BONDS

American Writing Paper Co. 6s '61	101⅜	101	101¼

Abitibi Shares Gain in Strength

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., July 24, 1944—Preferred shares of Abitibi Power and Paper Company, Ltd., showed considerable strength during the last week, reflecting the favorable showing of the company's annual statement recently released. Another factor, however, seems to have had an influence in the improvement in the shares. The street seems to have been expecting an announcment from Ontario's Premier, Col. Geo. A. Drew, with reference to his activities in trying to get the company out of receivership, but enquiries at Ontario Government offices failed to secure any evidence of any such statement and it was learned that there was no announcement pending on the part of the Ontario Government committee on Abitibi.

Since the annual statement showed a substantial reduction in Abitibi indebtedness last year and with substantial improvement in working capital since the last capital distribution about a year ago, it appears that a further repayment on the bonds may be in prospect. However, the company might prefer not to make further distribution at this time, with the hope that the Canadian dollar might be brought back nearer par, thus affording a considerable advantage.

The fact that the recent court decision is being appealed and that it may be a long time before a final ruling is secured may mean a considerable delay in ending the receivership. This delay would presumably work in favor of the preferred and common shareholders, providing the business of the company continued at a satisfactory level. Ability of the preferred and common shareholders to hold under circumstances prevailing may become an important bargaining point in working out an early compromise with the bondholders. While nothing definite is available, it is generally supposed that the efforts to effect a compromise are still going forward behind the scenes.

Container Corp. Nets $1.53

The Container Corporation of America reports consolidated net earnings for the six months ended June 30, 1944 were $1,195,143 or $1.53 a share, compared with a net profit of $833,219 or $1.06 a share for the six month period in 1943.

Consolidated net earnings for the three months ended June 30, 1944 were $625,626 or 80 cents a share, compared with a net profit of $455,860 or 58 cents a share for 1943.

Net sales for the six month period ended June 30, 1944 were $34,150,000, compared with $28,062,000 for the corresponding six month period in 1943, an increase of about twenty-two per cent. The Company's volume is limited by raw material and labor shortages rather than by machine capacity. In answer to inquiries made by several stockholders, it can be stated that this company has no machinery or plant reconversion problems facing it when the war ends; its regular peacetime machinery and processes are being used for the manufacture of both its war and essential civilian packages; the only difference is that the former, in most cases, demand stronger construction and other special features.

National Container Votes Dividend

The board of directors of the National Container Corporation at a meeting held July 19, 1944 voted as follows: A stock dividend, in the nature of and as a substitute for a stock split up, amounting to one (1) share of its common stock for each one share held, and a cash dividend of 25c per share.

Both of the above will be paid September 12, 1944 to stockholders of record at the close of business August 15, 1944.

Crown Zellerbach Mills Report

[FROM OUR REGULAR CORRESPONDENT]

VANCOUVER, B. C., July 24, 1944—Pacific Mills Limited operating their major plant at Ocean Falls and their paper converting plant at Vancouver, B. C., showed a profit of $654,298 for the year ending April 30, according to the report of the Crown Zellerbach, corporation parent company. Income was $10,886,440, expenses $9,381,410, taxes $850,000.

The report states that Pacific Mills had cutting rights valued at $1,617,281 at time of organization of the company. These expired in January and the company has made application for new licenses. The

stands concerned were not practical for cutting with profit.

Crown Zellerbach net profit for the year was $7,543,287 or $2.16 on the common stock after preference dividends, and sales at $97,883,813 were 13 per cent over the previous all-time high.

Affirms Groveton Papers Decision

WASHINGTON, D. C., July 26, 1944—The National War Labor Board today reaffirmed an earlier directive order upholding a decision of the First Regional WLB at Boston, Mass., which directed a general wage increase of five cents an hour for approximately 600 production and maintenance employees of the Groveton Papers Company of Groveton, New Hampshire. Industry members dissented.

The Board denied the company's petition for review of the Regional Board's order for the second time following a public hearing July 13 on the company's request for reconsideration of the Board's earlier action of March 7.

Because of a request for ceiling price relief, however, the Board's order cannot become effective until the Office of Price Administration determines that no price relief is necessary or, if it is, until approval is given by Director of Economic Stabilization Fred M. Vinson.

The employees are represented by the International Brotherhood of Pulp Makers and the International Brotherhood of Pulp Sulphite and Paper Mill Workers, both A. F. of L. unions.

The Regional Board on September 15, 1943, directed a general wage increase of five cents an hour, retroactive to February 25, 1943, date of certification of the dispute to the WLB, on the basis that the resulting rates were not in excess of the approvable rates for similar work in the area. The Regional Board denied requests for additional increases for six classifications of production workers because there was no evidence of a gross inequity in their rates. It also denied the union's request that there be set up six classes of maintenance employees and two classes of helpers with fixed rates involving increases varying from four to 10 cents an hour.

The company is approximately 60% in war production. The text of the Board's order will be issued later.

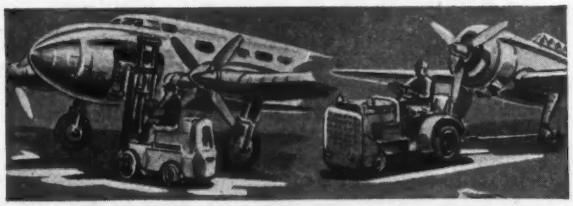
Mead Corp. Earns 41 Cents

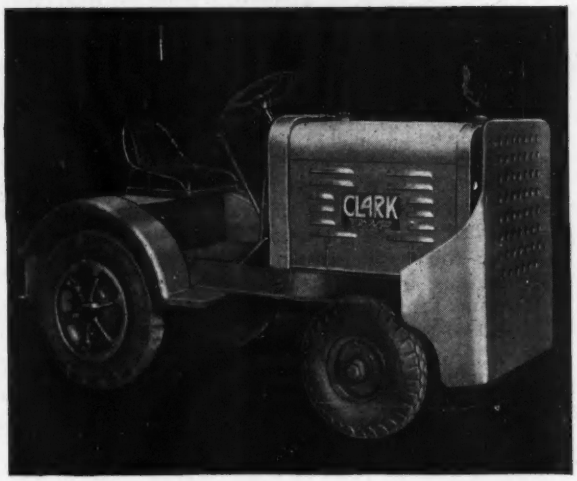
The Mead Corporation and subsidiaries for the twenty-four weeks ended June 10, reports net sales of $18,177,814, and a net profit of $494,293, equal to 41 cents a share on the common stock, compared with $16,599,996, $479,776, and 38 cents in the twenty-four weeks to June 12, 1943. Twelve weeks to June 10: Net sales, $9,212,815, and net profit, $249,076, or 21 cents a common share, against $8,170,129, $228,603, and 17 cents in the twelve weeks to June 12, 1943.

Offer Marathon Stock at $103.75

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., July 24, 1944 — A syndicate headed by Lee Higginson Corporation last Thursday offered 50,000 shares of Marathon Corporation 5% cumulative preferred stock at $103.75 per share.





CLARKTOR-6
INDUSTRIAL TOWING TRACTOR

The BIG job today and always is faster movement of materials. Delays in transportation cannot be tolerated.

Factories, warehouses, railway terminals and air ports are the hot spots where materials hit the bottleneck.

"Clarktor-6" towing tractors quickly relieve congestion in these areas. They tow loads up to 85 tons and prove their staying qualities on the job 24 hours every day.

They're built like a battleship and powered by gas for continuous service.

Another PRODUCT of CLARK EQUIPMENT COMPANY

Clark Tructractor builds industrial haulage vehicles for every material handling operation.

Write for New Vest Pocket Catalog

CLARK TRUCTRACTOR
DIVISION OF CLARK EQUIPMENT COMPANY
BATTLE CREEK, MICHIGAN, U.S.A.

Applications of Synthetic Rubbers

The purpose of this symposium developed for A.S.T.M. Committee D-11 on Rubber Products by a special committee headed by Arthur W. Carpenter, is to meet the present need for authentic technical information on the uses of various synthetic rubbers. The publication is considered timely because of the rapid increase in the use of synthetic rubbers in many fields, and the lack of a compilation of data on their efficiency and serviceability in these fields. Some of the country's outstanding authorities presented technical papers and discussion. Following papers on the origin and development of synthetic rubbers (Fisher); physical testing (Cooper); there is a comprehensive discussion on physical properties (Ball and Maassen); specifications (De France); and an interesting evaluation of processing characteristics and the use of synthetic rubbers in the manufacture of extruded products (A. E. Juve).

Then follows a series of papers covering specific applications, including rubber tires and inner tubes (Torrance); belting and hose (White); molded products (Sanger); cellular rubbers (Gould); hard rubber products (W. H. Juve); use in the wire and cable industry (Schatzel); footwear (Glover); and adhesives (Wehmer).

Copies of this 140-page publication, which includes a large number of charts, tables, etc., can be obtained from A.S.T.M. Headquarters, 260 S. Broad St., Philadelphia 2, Pa., at $1.75 (cloth binding) or $1.50 (paper binding).

To Buy Eight Field Ambulances

Employees of the Dunellen, N. J. plant of National Starch Products Inc. set themselves a quota of eight field ambulances for the Fifth War Loan Drive, and more than subscribed the total figure, which was twice that set for the Fourth War Loan Drive.

This plant already has to its credit two large Army Scout Cars equipped with machine guns, and two Jeeps which were purchased with bonds sold in the Fourth War Loan. In recognition of this splendid record the employees received the Merit Award Placque from the Treasury Department.

Each vehicle thus purchased carries a plate inscribed as follows: "Presented to the U. S. Army by the employees of National Starch Products .Inc., Dunellen, N. J., through the purchase of War Bonds."

A similar drive for the Fifth War Loan was con ducted at all other National offices and plants.

To Be Sold by Heller & Merz

Products for the paper trade made by the Pigment Department, Calco Chemical Division, American Cyanamid Company, whose formation was announced July 1, will be sold by the Heller & Merz Department.

The Heller and Merz organization, long a leader in this field, is headed by J. H. Loomis, Sales Manager.

In announcing the new set-up, Mr. Loomis also stated that Unitane (titanium dioxide) and other products of the Virginia Chemical Corporation, whose manufacturing facilities have just been acquired by Calco, will be sold by his department.

Though already quite complete, the addition of these products will greatly expand the Heller & Merz line.

Hathorn Acquires Minerva Co.

MINERVA, Ohio, July 24, 1944—Minerva Wax Paper Company, of Minerva, Ohio has just been acquired by R. G. Hathorn, 967 Union Commerce Building, Cleveland. He states that he will continue to operate the company without any change in its operating management.

The Minerva Wax Paper Company was organized more than twenty-five years ago by P. A. McCaskey the inventor of the McCaskey Register and with his retirement as president of the company, it is announced by Mr. Hathorn the new owner of the company, that A. F. Gluck of Minerva has been elected to succeed him as president and will also retain his position as general manager. Mr. Gluck has been associated with the company as general manager since its inception.

W. L. Hogue who has been with the company for twenty years has been promoted to vice president and Robert Jamison, a partner of the law firm of Garfield, Baldwin, Jamison, Hope and Ulrich, Cleveland is the new secretary and Arthur Bluck, Jr., has been elected as treasurer. R. C. McCaskey is vice president in charge of sales with headquarters in the Hanna Building, Cleveland. Mr. Hathorn although elected as executive vice president, will continue his present brokerage business and will maintain offiices in Cleveland.

The company is one of the principal manufacturers of wax paper for industrial, commercial and home use and its products are extensively used throughout the States east of the Mississippi.

In addition to its regular product the company is also producing a very substantial tonnage of wax papers for use by the armed forces.

Second Star for Foxboro's "E" Flag

In a letter appropriately dated July 4, Admiral C. C. Bloch, USN (Ret.), Chairman of the Navy Board for Production Awards, has informed The Foxboro Company, Foxboro, Mass., of its second renewal of the Army-Navy "E" Awards "for meritorious service on the production front." The Foxboro Company manufactures industrial instruments for process measurement and control.

Admiral Bloch's letter reads, in part: "The men and women of your plant have continued to maintain the high standards they set when they were originally awarded the Army-Navy 'E' Flag. The second white star which this renewal adds to your Flag is the symbol of appreciation from our Armed Forces for your continued untiring eport and support so necessary for Victory."

Goodrich Adhesives Catalog

A new catalog section on its line of adhesives or cements has just been published by The B. F. Goodrich Company and is now available upon request. In addition to the field of adhesives, the materials covered in the volume serve as fabric coatings, binders, sealers, etc.

The catalog section discusses the service requirements and classification of the various adhesives, and then lists and discusses each type offered. Instructions on application and data on the company's standard containers are included, with approximate shipping weights.

Many of these cements are, at the present time, sold only under the rubber restriction order so can only be used for permissible purposes.

Ever wonder what this symbol means?

TRADE MARK

NEWER DEVELOPMENTS IN SYNTHETIC RESINS

THE ancient alchemist would recognize it as an adaptation of his symbol for a gum or resin. The skilled technician of today will recognize it as his assurance of satisfaction in synthetic resins. The far-sighted business man recognizes the trade-mark of The Resinous Products & Chemical Company as a sign of progress—symbol of newer developments in synthetic resins.

COATINGS—The AMBEROLS, introduced by The Resinous Products & Chemical Company in 1926, first made possible the production of 4-hour enamels. Today AMBEROL, DURAPLEX, PARAPLEX, AQUAPLEX, UFORMITE and ACRYLOID occupy leading positions in the protective and decorative coatings field.

PLYWOOD—TEGO Resin Film, introduced in 1935, was the *first* adhesive to permit the production of completely waterproof plywood. Today, TEGO still stands first in acceptance for the bonding of aircraft and marine plywood...and remains the *only* adhesive for use on very thin veneers.

PROCESS INDUSTRIES—The AMBERLITE Ion Exchange Resins offered the first means of producing deionized water at low cost...provided new tools for such applications as the purification of chemicals and the recovery of vitamins.

PAPER—The UFORMITES in 1932 revolutionized the preparation of decorative laminated wall paneling and table tops, next found use in imparting crush resistance and permanent finish to textiles, were followed by organic soluble types for coatings, and in 1938 originated the use of resins in improving wet strength of paper, fibre and corrugated board.

PLASTICIZING APPLICATIONS—Many new materials for plasticizing nitrocellulose and vinyl resins, modifying rubber, and for specialized applications, were also first developed by The Resinous Products & Chemical Company. Among these plasticizers, the PARAPLEXES are particularly noteworthy.

Whatever the problem in these various fields, if there is need for synthetic resins, consult The Resinous Products & Chemical Company. The familiar octagonal trade-mark of this synthetic resin pioneer is your assurance of quality, reliability and progress.

3 awards to The Resinous Products & Chemical Company and its associated firms, Rohm & Haas Company and Charles Lennig & Company.

AMBEROL, DURAPLEX, PARAPLEX, AQUAPLEX, UFORMITE, ACRYLOID, TEGO, and AMBERLITE *are trade-marks, Reg. U.S. Pat. Off.*

Represented by Cia. Rohm y Haas, S.R.L., Carlos Pellegrini 331, Buenos Aires, Argentina, and agents in principal South American cities.

THE RESINOUS PRODUCTS & CHEMICAL COMPANY

WASHINGTON SQUARE, PHILADELPHIA, PA.

Revises Paper Board Regulations

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 26, 1944 — Revised regulations covering the use of paper board, including folding box board, set-up boxboard and some miscellaneous grades of paper board, were issued today by the War Production Board in the form of an amendment to Conservation Order M-378.

In order to receive shipments of paper board after August 7, 1944, everyone except jobbers or small users must file a report with the War Production Board before that date, stating the tonnage of products made from paper board during the first quarter of 1944, defining the products and estimating the proposed third-quarter production, Arnold B. Huyssoon, assistant director of WPB's Paperboard Division, said.

The reports from the paper board consumers, Mr. Huyssoon explained, will be used by the Paper Board Division as the basis for preparation of a paper board authorization system for the fourth quarter commencing October 1, 1944. Such a system, he said, probably will be similar to the procedure established for container board control under Order M-290.

Paper board, as defined in the amended order, includes all grades of paper board classified under WPB-514, captions 221,000 through 269,000, except press board, homogeneous and hard pressed wall boards, insulating building boards, and certain solid sulphite and sulphate grades. The paper board Order M-378 does not control container board as defined in Order M-290.

Jobbers who handle paper board for resale as such, whether after further fabrication or not, and small users of less than five tons per quarter, it was pointed out, are exempt from acceptance requirements. The order also exempts any paper board in transit at midnight on August 6, 1944. On and after August 7, 1944, delivery of paper board by a supplier is prohibited unless the order is accompanied by a certificate stating that the purchaser has filed the required WPB form; or, in the case of a jobber, that he accepts it merely for resale; or, in the case of a small user, that he will not use in excess of five tons per quarter. These delivery restrictions are not in effect on lots of less than 50 pounds, it was made clear.

Until the order is further amended, WPB said, any user who has filed the required form with WPB may receive shipments in the normal manner from his suppliers without authorization. A further provision is that the paper board purchaser need make only one certification to each supplier that he had filed an application on Form WPB-3811 with WPB.

A further important feature is that inventory restrictions were increased from 30 to 60 days' supply.

New Booklet on V-Belt Drives

A new 44-page handbook on industrial fractional horsepower V-belt drives has just been published by The B. F. Goodrich Company, Akron, Ohio, and is now available upon request.

The booklet notes the trend toward larger sheaves in both fractional horsepower and multiple V-belt drives, describes the construction of B. F. Goodrich fractional horsepower V-belts and gives prices and data on both sheaves and belts.

We're in it for the duration

SINCE 1828

Continuously We Have Served The Paper Industry.

Since War II was declared we have used all our manufacturing facilities, and done our small part to help build our fighting machine for war.

At the same time we have been planning for peacetime equipment and improvements NOW!

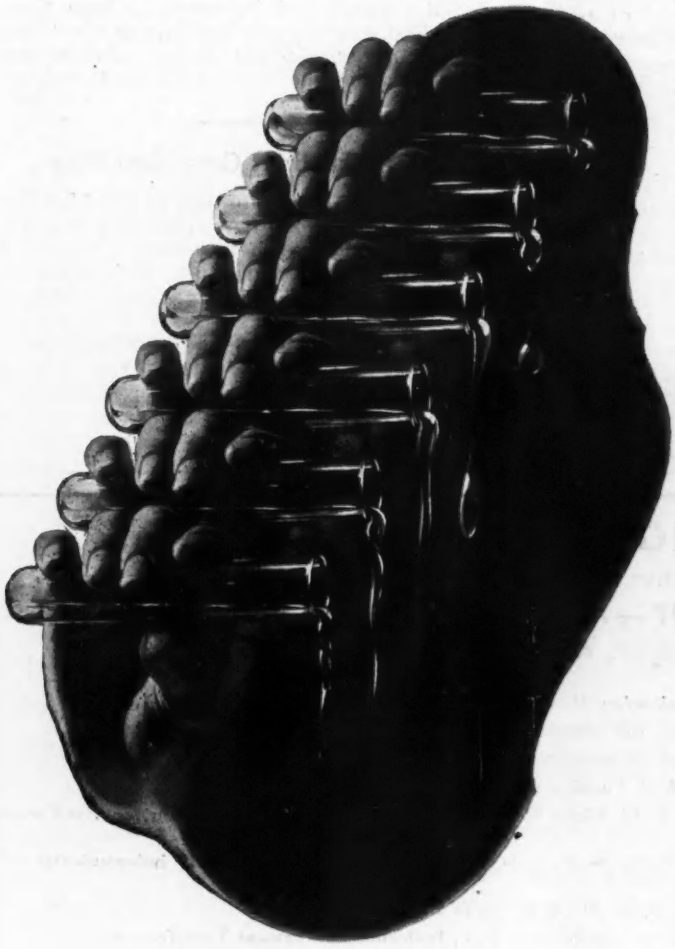
We have some of our machines available to produce new machinery for civilian products.

Paper Machines
Paper Bag Machines **Paper Cutters**
Can be built with a PDIA Priority rating.

THE SMITH & WINCHESTER
MANUFACTURING COMPANY
PLANT AND OFFICES AT SOUTH WINDHAM, CONNECTICUT

WIDE RANGE FLOWABILITY

A VARIETY OF VISCOSITY TYPES TO FIT EVERY JOB



In the preparation of a product, you have undoubtedly often wished for a water soluble colloid available in several different viscosities. Perhaps you wanted a solution much thicker—or considerably thinner—in order to obtain the specific results desired.

To meet your most exacting needs, we have designed Methocel in a wide variety of viscosity types. Selection of the most suitable type is dependent, of course, on results required and manufacturing limitations. Only when the right viscosity is used are maximum economy and efficiency achieved.

This wide-range flowability greatly expands the additional usefulness of Methocel in your operations—and, at the same time, promotes efficiency of application.

METHOCEL
THE UNIFORM SIZING MATERIAL

Methocel provides an unusual surface film or coating for many paper products. Here, selection of the correct viscosity type is of primary importance. It calls for application of the *thickest solution* which can be handled by the available equipment and which, at the same time, supplies sufficient solids to produce the required surface film. In this way, the Methocel coating is deposited on the surface and does not tend to penetrate the stock—providing maximum protection.

It should be noted, however, that because most machines and processes present different problems, it is necessary to determine carefully which Methocel type best fits your needs. Before adopting a specific Methocel type, we urge you to refer your problem to the Technical Service and Development Division.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

METHOCEL

Among the many Dow Products serving the Paper Industry are: Ethocel, Dowicides and Caustic Soda.

DOW

CHEMICALS INDISPENSABLE
TO INDUSTRY AND VICTORY

Container Stocks in Paper Division

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 26, 1944—Sanitary food container paper stocks have been placed under the jurisdiction of the Paper Division of the War Production Board and are now included in Conservation Order M-241 through the addition of Appendix B of that order, War Production Board Paper Division officials announced today.

The production of paper cups, food containers, milk bottles and other sanitary food container items has been held to the maximum production of the last quarter of 1943. Pulp has been allocated for these grades on that basis.

The amendment assures the equitable distribution of the available supply of paper and paper board to the converters, WPB said. The sale and delivery of sanitary food container stock is prohibited except under authorizations issued by the War Production Board and then only in specified amounts.

Duty on Paper Imports

The shortage of container board for the making of boxes for military as well as civilian supplies has resulted in some unusual purchases of such material in Canada, according to Warren B. Bullock, manager of the Import Committee of the American Paper Industry. Imports of several such types of material have been questioned on the basis of their classification for duty. Shipments of paperboard for cereal manufacturers at Minneapolis and Buffalo have been classified for duty at 30 percent as vat-lined board, but the importers claim the material is not vat-lined and that it is properly dutiable at 10 percent as plain paper board.

A Milwaukee importer has brought in two shipments of deep yellow material less than 12 points in thickness, and the material has been classified at 30 percent as paper not specially provided for, the Tariff Act providing that no material under 12 points in thickness may be classified as paper board. The importer, however, is claiming the lower rate.

An importer of printing paper from Newfoundland claims a shipment of paper weighing 35.8 to 36 pounds under the TAPPI testing method, is not dutiable as classified by the Customs officials, but duty free as standard newsprint.

Considerable note paper in pad and envelope form, also boxed papeterie is being imported from Great Britain and is being assessed for duty at the British value of the paper, plus the British purchase tax. The importers claim the inclusion of the British tax is illegal.

Philadelphia Plant Gets New Flag

On June 22 the employees of the Philadelphia Plant of Container Corporation of America received a new Army-Navy "E" Flag with two stars. The second star was presented in recognition of their continued excellent production of vital war cartons and containers.

When this Plant received its original Army-Navy "E" Flag on May 5, 1943, it was the first plant in the paperboard and paperbox industry to receive such recognition. The first star was added to the Flag in November, 1943.

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GRUENDLER Crushers & Pulverizers:—Separator & Conveying Equipment. PAPER MILL Knot & Screenings—BARK HOGS, Etc.

PALMER-BEE Conveyors & Transmission Machinery.

PLYMOUTH Locomotives:—Gasoline & Diesel Mechanical & Elec. Drives to 120 Tons.

HERCULES Engines:—Gasoline-Natural Gas & Diesel to 150 HP.

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To Show Contribution of Chemicals in the War

How the chemical industry has contributed to the war effort and its effect on the immediate post war period will be emphasized at the third National Chemical Exposition and National Industrial Chemical Conference to be held Nov. 15 to 19 at the Coliseum in Chicago under the sponsorship of the Chicago Section of the American Chemical Society.

"Every telling blow rendered by our armed forces against the enemy brings us nearer the peace," said M. H. Arveson, chairman of the exposition committee. "It is a widely known and accepted fact that the chemical industry is taking a major part in the war effort. It reaches into virtually every industry and every product and is credited with scientific advancements that have contributed to the assured victory of the Allies.

"The show and conference will have a new significance, therefore, this year. It will depict the science of chemistry in many of its phases and its application to industry and the needs of mankind in peace as well as wartime."

Mr. Arveson said that new discoveries and products which have been developed during the war by the chemical industry will soon play an important part in providing luxuries as well as the necessities of life for civilian use.

"Just at present we are facing the problem of providing additional space to accommodate an almost overwhelming demand," said Mr. Arveson. "We are negotiating for the North Hall of the Coliseum which will yield 71 additional spaces if we can complete the deal."

Invitations have been sent to well-known authorities on practically every phase of applied chemistry who have been asked to address and lead discussions on important topics at the National Industrial Chemical Conference. The commodious second floor of the Coliseum Annex will house the conference. It may be reached directly from the exposition hall.

The show and conference advisory committee is composed of the following:

Allen Abrams, vice-president, Marathon Paper Mills; George Granger Brown, president, American Institute of Chemical Engineerse; J. V. N. Dorr, president, The Dorr Company, Inc.; Willard H. Dow, president, Dow Chemical Company; Gustav Egloff, director of research, Universal Oil Products Company; Otto Eisenschiml, manager, Scientific Oil Compounding Company; Per K. Frolich, director of chemical division, Esso Laboratories, Standard Oil Development Company; Frank Baldwin Jewett, Chairman, Bell Telephone Laboratories, Inc.; C. F. Kettering, vice-president, General Motors Corporation; S. D. Kirkpatrick, Editor, Chemical & Metallurgical Engineering; C. S. Marvel, president-elect, American Chemical Society, C. E. K. Mees, vice-president in charge of research, Eastman Kodak Company; Thomas Midgley, Jr., president, American Chemical Society; C. S. Miner, director, Miner Laboratories; Walter J. Murphy, Editor, Industrial Engineering Chemistry; R. C. Newton, vice-president, Swift & Company; Charles L. Parsons, secretary, American Chemical Society; Holman D. Pettibone, president, Chicago Association of Commerce; Edgar M. Queeny, chairman of the board, Monsanto Chemical Company; N. A. Shepard, chemical director, American Cyanamid Company; Robert Taylor, editor, *Chemical Industries;* E. R. Weidlein, director, Mellon Institute of Industrial Research, and Frank C. Whitmore, dean of School of Chemistry and Physics, Pennsylvania State College.

Marcus W. Hinson, manager of the exposition, maintains headquarters at 330 South Wells street, Chicago.

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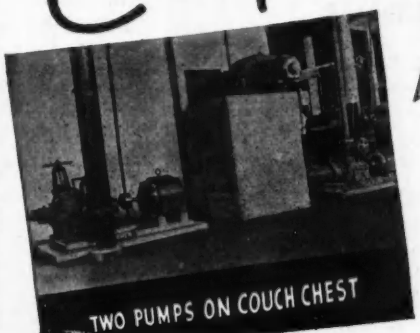

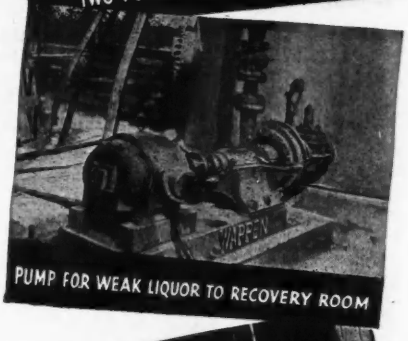

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COMING EVENTS IN PAPER INDUSTRY

NEW ENGLAND SECTION. Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Roger Smith Hotel, Holyoke, Mass.

DELAWARE VALLEY SECTION. Technical Association of the Pulp and Paper Industry—First Friday of each month at the Engineers Club, Philadelphia, Pa.

LAKE STATES SECTION. Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway Hotel, Appleton, Wis.

KALAMAZOO VALLEY SECTION. Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park, American Hotel, Kalamazoo, Mich.

CHICAGO PROFESSIONAL PAPER GROUP—First Monday of each month except July and August at Chicago, Ill.

WOOD PULP SUPPLY

Inventories of wood pulp for May were approximately 3% above April, 1944, about 42% below May, 1943 and 52% below May, 1942. Although there was a 3% increase in total pulp inventories, the Department of Commerce reports, at the end of April above March, 1944, inventories at that date were 45% below 1943. The critical supply situation in wood pulp is reflected in the low inventory positions of many paper mills who are forced to operate on a hand to mouth basis. The high point in inventories, since March, 1942, was reached in August of that year, when the supply was 978,000 tons. Since that date a gradual decrease has occurred, with some improvement shown in April of this year. In that month, however, inventories were only 296,000 tons —revealing a critical situation.

The unfavorable wood pulp supply situation is not largely attributed to the recent strikes on the west coast. These suspensions of productivity retarded log production and deliveries, but did not greatly affect the pulp supply, excepting one mill utilizing sawmill waste. The loss of log production may be felt later in the year. On June 5, about 70% of the labor on strike had returned but some changes in employment have resulted unfavorable to pulp production. Near the end of the second quarter, direct military allocations increased substantially in bleached sulphite. This essential requirement could only be met by reducing authorized second quarter consumption of sulphite pulp, the Department explains, for the manufacture of other products. This situation resulted in reductions in the authorized use of pulp in the manufacture of greaseproof, glassine, vegetable parchment, waxing paper, and in transparent cellulose sheeting. The Department of Commerce reports that the authorized use of pulp for the production of the above papers was 10% higher than the actual authorized fourth quarter use of pulp. Most grades of papers, on the other hand, had less pulp.

The increased military demands for nitrating pulp will be especially hard on the mills using prime grades of bleached sulphite, the Department reports points out, and the ultimate result will be that civilian needs will probably be further curtailed. An analysis of the situation seems to indicate that if there was sufficient manpower to cut pulpwood, enough wood pulp would be produced to meet all-over needs, as the industry has the capacity. Wood pulp production in April, 1944, was about the same as for 1943, but about 4% below March, 1944. Output for the first four months was 3,254,000 tons, or 2% above the same period last year. Total supply, including imports for the four months, was 3,609,000 tons, about 1% above the total supply, inclusive of imports, for the same period in 1943.

A favorable aspect of the pulp situation is in the rising receipts of pulpwood. For the first five months of 1944, wood receipts were 23.4% above the same period in 1943, but 5% lower than in 1942. If this very favorable trend continues, the Department of Commerce states in its last report, half-year receipts should approximate 8,000,000 cords, compared with a three-year average of 7,608,000 cords. Inventories of all grades at the end of May, 1944, were above 400,000 tons and the trend was upward at that date in bleached sulphite, bleached and unbleached sulphate and miscellaneous pulps. The trend appeared downward in groundwood, unbleached sulphite and in soda pulps. Total production of wood pulp, for the first five months of 1944 increased 5.5% above 1944, with 4,118,000 tons. The only increases were indicated in miscellaneous grades, up 70.4%, unbleached sulphate, up 5.7%, and groundwood up 1.1% in the first five months of 1944 over 1943. Total imports were 12.9% lower for the five-month period. Domestic consumption of all grades for the first five months of 1944, totaled 4,501,000 tons, compared with 4,533,000 tons in the same period in 1943. Miscellaneous papers consumed 51.4% more pulp, groundwood products, 2.1% more pulp, while the consumption of unbleached sulphate pulp was 0.6% more in 1944 than in the same comparable period last year. Total pulp exports for the first five months of 1944 totaled 83,000 tons, a decline of 17% from the five-month period in 1943. Inventories for the period totaled 407,000 tons in 1944, compared with 704,000 tons in the first five months of 1943, a decline of 42.2%.

In its interpretation of the production figures, the Department of Commerce explains that, output for the first five months of 1944 was about 6% above the like period in 1943. There has been no change in the agreement between the United States and Canada for shipment of 1,100,000 tons of wood pulp from Canada to the United States during the current year. Government and defense plant demands for pulp and paper products have continued on an upward trend for many months, the Department states. This tightened supply has been reflected in particular in the container board field, with the necessity of more stringent controls on end-uses. In the paper field, there is relative little direct control on specific end-use of the quantities available for domestic non-

government consumption. The principal controls in the paper field are the Limitation Orders restricting printing paper consumption. It is recognized, the Department further states, that most domestic paper users, including industrial plants, distributors, State and municipal governments, the Federal Government, as well as individual civilians, have shown a splendid spirit of cooperation in this direction, but more remains to be accomplished.

In commenting on third quarter allocations the Department states, that up to 2,617,000 tons of wood pulp will be allocated for the production of paper and paper board. Non-integrated mills without supplementary fiber were authorized to consume during the third quarter sufficient pulp to give them an estimated minimum operation of 3½ days a week, unless authorization was given to increase this ratio of production. Wholehearted efforts of the industry and Government alike in the past few months have increased the supply of fibrous raw materials. At the end of May the total was 2,911,000 tons, compared with 2,731,000 tons on January 1, or an increase of 7%.

Corrugated Paper Corp. Incorporates

BOSTON, Mass., July 24, 1944—New corporations filed at the office of the Secretary of the Commonwealth include the Corrugated Paper Corporation, Mechanic street, Clinton, with capital stock of 1000 common shares, no par value. Michael C. Dowd is president and treasurer and Vina Dowd, clerk.

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1944		Corresponding Weeks—1943	
June 10	91.5	June 12	88.0
June 17	92.8	June 19	87.0
June 24	92.4	June 26	87.0
July 1	89.5	July 3	77.4
July 8 ... (Holiday Week)	53.8	July 10	66.2
July 15	*91.1*	July 17	90.2

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year Avg.
1943.	87.2	88.9	89.5	88.7	91.4	84.8	84.3	91.0	88.3	89.6	89.6	82.0	87.8
1944.	89.6	89.6	90.1	89.5	90.9	*92.6*	...	...	...	...	...	...	...

COMPARATIVE YEARLY SUMMARIES

	1937	1938	1939	1940	1941	1942	1943	1944
Year to Date	88.0	67.4	78.6	86.7	93.1	96.3	87.6	*89.0*
Year Average	79.8	71.5	83.4	85.6	97.4	90.4	87.8	...

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

PAPERBOARD OPERATING RATIOS†

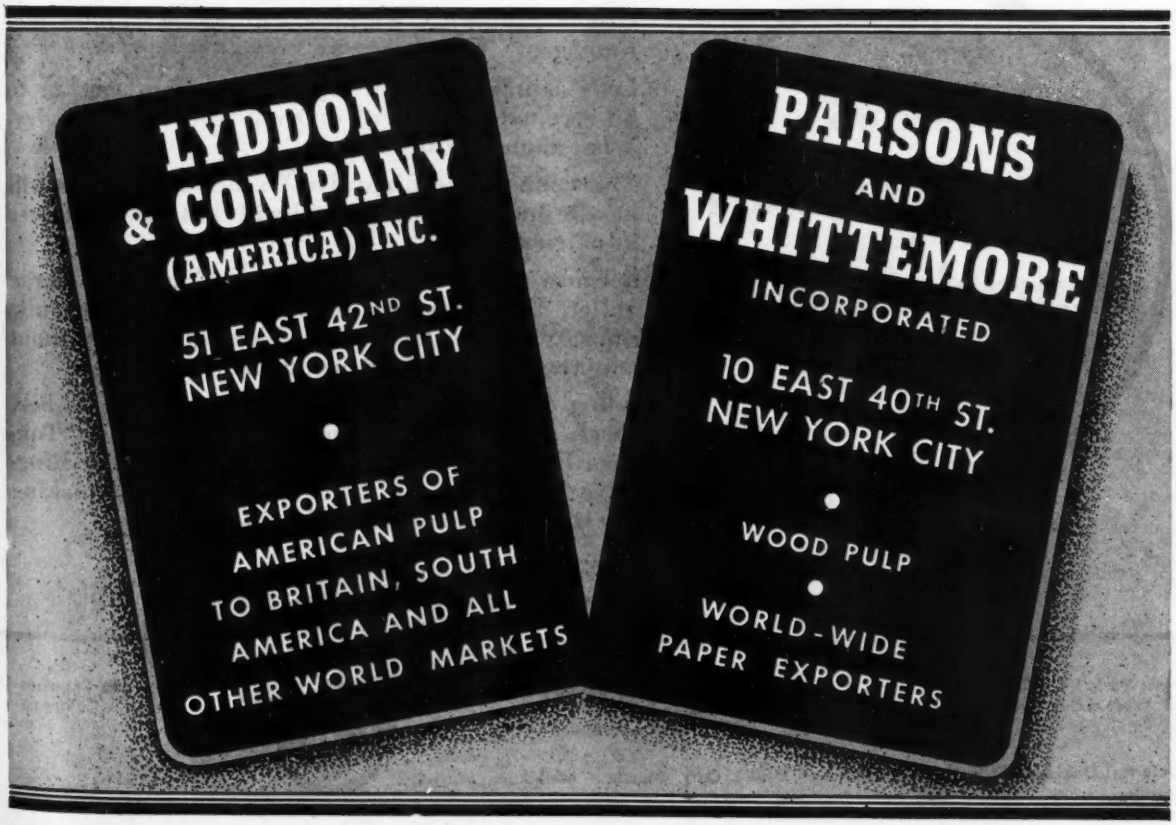
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year Avg.
1938	56	63	63	60	60	59	59	69	70	73	67	61	64
1939	65	73	76	74	69*	73	68	77	82	91	88	77	77
1940	78	75	74	76	82	85	77	79	78	85	83	77	78
1941	81	88	89	89	91	94	92	98	95	99	98	90	92
1942	102	101	101	95	82	72	68	75	76	81	82	77	84
1943	86	88	94	94	96	94	89	96	94	94	93	87	93
1944	90	96	95	96	96	*96*	..	..	..	..	..	..	..

Week ending June 10, 1944—96
Week ending June 17, 1944—95
Week ending June 24, 1944—96
Week ending July 1, 1944—95
Week ending July 8, 1944—60
Week ending July 15, 1944—*91*

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Assn.

Plan To Reconstruct Cascade Mills

Plans are being made for reconstruction and expansion of the Cascade Mills of the Brown Company, Berlin, N. H., at an estimated cost of $6,500,000.



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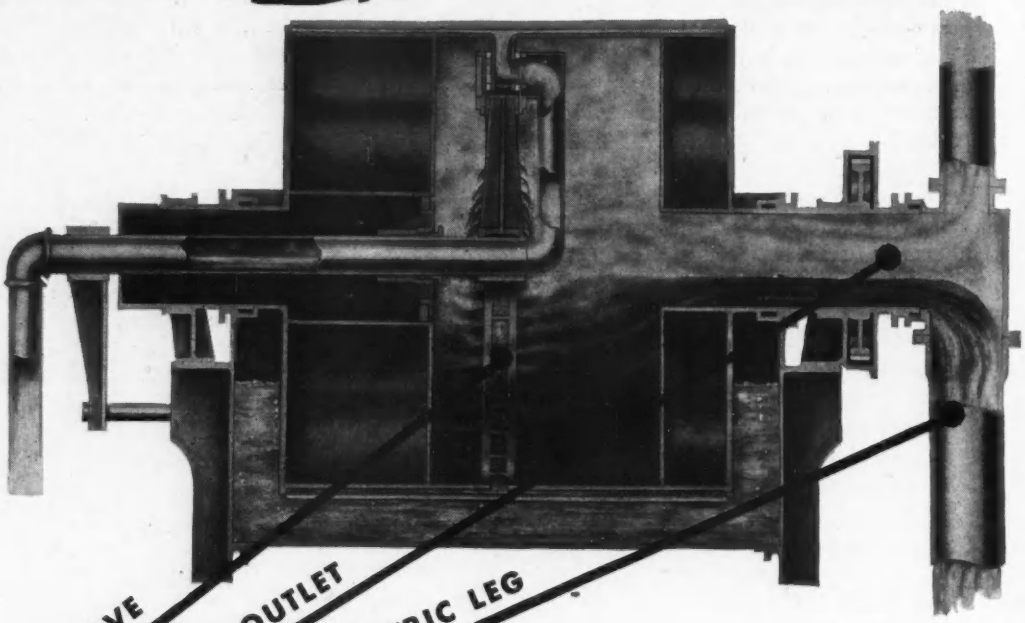

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Section of the
TECHNICAL ASSOCIATION
OF THE PULP & PAPER INDUSTRY
122 E. 42nd St., New York 17, N. Y.
Edited by R. G. Macdonald, Secretary

United States Patents on Papermaking

Second Quarter, 1944

Compiled by Clarence J. West, Chairman, Committee on Abstracts and Bibliography, TAPPI

The following list of patents has been compiled from the current numbers of the Official Gazette of the United States Patent Office. Because, as a rule, only one claim is published in the Gazette, it is not claimed that the list is complete; also, it is possible that the list may contain some patents which do not apply to pulp and paper manufacture.

Copies of any of the following patents may be obtained from the U. S. Patent Office, Washington, D. C., by sending ten cents for each patent desired. The number of the patent, the name of the inventor, and the title of the patent should be given in the request. Personal checks and postage stamps are not accepted in payment for patents. Books of coupons amy be purchased for two or ten dollars, good for 20 or 100 patents. Coupon orders do not have to be accompanied by letters of transmittal.

April 4, 1944

2,345,565. Bottle holder. Edwin L. Arneson, assignor to Morris Paper Mills, Chicago, Ill. Filed June 17, 1940. 14 claims. (Cl. 229-52). A knock-down carrier carton formed of paper board.

2,345,566. Bottle carrier. Edwin L. Arneson, assignor to Morris Paper Mills, Chicago, Ill. Filed March 17, 1941. 10 claims. (Cl. 229-52).

2,345,567. Bottle holder. Edwin L. Arneson, assignor to Morris Paper Mills, Chicago, Ill. Filed April 6, 1942. 12 claims. (Cl. 229-52).

2,345,568. Bottle holder. Edwin L. Arneson, assignor to Morris Paper Mills, Chicago, Ill. Filed May 14, 1942. 24 claims. (Cl. 229-52).

2,345,646. Box, carton, or similar device. Marshall I. Williamson, New York, N. Y. Filed July 13, 1940. 8 claims. (Cl. 229-38). A folding box.

2,345,647. Papermaking machine. George S. Witham, Hudson Falls, N. Y. Filed Oct. 2, 1940. 4 claims. (Cl. 92-44). Use of air applied to the fibers when forming the web to improve the formation, to attain a desired blending of stock, and free the stock of entrapped air to reduce blemishes.

2,345,716. Hollow walled carton. Milton A. Smith, assignor to Chicago Carton Company, Chicago, Ill. Filed Feb. 10, 1940. 7 claims. (Cl. 229-34). A paperboard box.

2,345,721. Sterilizer. Edwin E. Allstatter, Middletown, Ohio. Filed Aug. 18, 1939. 1 claim. (Cl. 21-91). A cabinet for sterilizing facial tissue by means of heated air.

2,345,746. Bottle carrier. Charles H. Goodyear, assignor to Fibreboard Products, Inc., San Francisco, Calif. Filed July 22, 1941. 5 claims. (Cl. 229-52).

2,345,810. Folding box. Raoul J. Gruenberg, San Francisco, and Edgar L. Stern, Pasadena, Calif. Filed April 11, 1941. 6 claims. (Cl. 229-35).

2,345,844. Resilient mesh material. Howard F. Weiss, assignor to Research Products Corporation, Madison, Wis. Filed May 6, 1941. 17 claims. (Cl. 117-98). A method of coating slitted and expanded sheet material with an aqueous dispersion of rubber.

2,345,978. Package. Oscar H. Hultin, assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass. Filed Jan. 15, 1942. 4 claims. (Cl. 229-17).

2,346,003. Collapsible carton. Charles B. Bishop, assignor to Container Corporation of America, Chicago, Ill. Filed July 2, 1942. 3 claims. (Cl. 229-23). A corrugated or solid paperboard carton.

2,346,008. Manufacture of paper for photographic purposes. Halford R. Clark, assignor to Eastman Kodak Company, Rochester, N. Y. Filed July 27, 1940. 15 claims. (Cl. 95-8). Paper is coated with barium sulphate mixed with a water-susceptible fatty acid ester of cellulose and an overcoating thereover of a silver halide emulsion.

2,346,025. Collapsible egg carrier. Francisco Guszmann, Buenos Aires, Argentina. Filed April 23, 1941. 1 claim. (Cl. 217-31).

April 11, 1944

2,346,134. Dispensing container or carton. Edward W. Kirkland and Herman E. Otto, assignors to Cooper Paper Box Corporation, Buffalo, N. Y. Filed Nov. 12, 1942. 6 claims. (Cl. 221-64).

2,346,135. Method of making tubular casings for shipping containers. George Kress, Green Bay, Wis. Filed April 9, 1941. 6 claims. (Cl. 93-94).

2,346,191. Bag making machine. Charles F. Schultz and Ira E. Schultz, Oakland, Calif. Filed Feb. 17, 1940. 23 claims. (Cl. 93-8).

2,346,206. Divided carton. Frank W. Broderick, assignor to Reynolds Metals Company, Richmond, Va. Filed Nov. 28, 1941. 6 claims. (Cl. 229-27).

2,346,220. Tool for sampling baled material. Lester C. Kienzle and Herbert J. Wollner, assignors to The Prosperity Company, Inc., Syracuse, N. Y. Filed Sept. 4, 1941. 2 claims. (Cl. 73-22).

2,346,243. Method of treating pigment and product. Alfred D. Wilson, assignor to S. D. Warren Company, Boston, Mass. Filed Nov. 18, 1940. 12 claims. (Cl. 106-306). A method of grinding an aqueous suspension of calcium or magnesium carbonate or mixed pigments with a deflocculating agent (0.25-5% on the weight of the dry pigment), which reduces the adhesive requirement of the material.

2,346,292. Valve bag. Thomas E. Coty, assignor to Coty Machine Corporation, Watertown, N. Y. Filed Oct. 21, 1940. 3 claims. (Cl. 229-62.5).

2,346,400. Cellular egg carton. Louis Schwartzberg, Chicago, Ill. Filed Aug. 8, 1942. 4 claims. (Cl. 229-28).

2,346,419. Mailing envelope. Newell F. Dunlop, San Francisco, Calif. Filed Jan. 26, 1942. 3 claims. (Cl. 229-68).

2,346,466. Shipping container. Jack R. Belsinger, assignor to Belsinger, Inc., Atlanta, Ga. Filed Jan. 29, 1942. 1 claim. (Cl. 229-23). A multipart knockdown shipping container.

2,346,538. Container. Max Kleinmann, assignor to American Safety Razor Corp., Brooklyn, N. Y. Filed Oct. 5, 1939. 1 claim. (Cl. 229-46).

2,346,608. Machine for manufacturing molded pulp articles. Walter H. Randall, assignor to The Canal National Bank of Portland, Portland, Maine. Filed July 15, 1941. 10 claims. (Cl. 92-56).

April 18, 1944

2,346,644. Method of bonding. Hans F. Bauer, Jordan V. Bauer, and Don M. Hawley, assignors to Stein, Hall Canufacturing Company, Chicago, Ill. Filed March 18, 1940. 9 claims. (Cl. 154-40). An adhesive consists of boric acid, a starch adhesive dispersed in water and an alkaline fluidity increasing agent.

2,346,684. Container. John M. Hothersall, assignor to American Can Company, New York, N. Y. Filed Dec. 21, 1939. 1 claim. (Cl. 229-5.5). A leak and moistureproof fiber container.

2,346,685. Container. John M. Hothersall, assignor to American Can Company, New York, N. Y. Filed Sept. 6, 1941. 2 claims. (Cl. 229-45). A sealed sanitary fiber container.

2,346,691. Cartridge container machine. August G. Liebmann, assignor of one-half to Harry A. Blessing, Washington, D. C. Filed July 6, 1942. 5 claims. (Cl. 93-55.1).

2,346,710. Method of making handled bags. Harford K. Steen, assignor to Interstate Bag Co., Walden, N. Y. Filed June 10, 1940. 2 claims. (Cl. 93-35).

2,346,746. Continuous freeness recording method and means. Arthur B. Green, assignor to Paprex Company, Wakefield, Mass. Filed March 3, 1941. 15 claims. (Cl. 73-51).

2,346,756. Paper reel brake. William Hoppe, assignor to National Bread Wrapping Machine Co., Springfield, Mass. Filed Jan. 10, 1942. 3 claims. (Cl. 188-83).

2,346,785. Suction box top for papermaking machines. Jean Proulx, Hull, Quebec, Canada. Filed Oct. 15, 1942. 3 claims. (Cl. 92-51). An end-of-grain wood block having the fibers and pores thoroughly impregnated with a mixture of wax and lanolin, the lanolin being in the proportion of 0.5-10%.

2,346,788. Separator for cartridge cartons. Eugene B. Rice, Denver, Colo. Filed Aug. 8, 1941. 4 claims. (Cl. 229-28).

2,346,792. Cardboard box. Augustus T. Rush, assignor to Newark Paper Box Company, Newark, N. J. Filed Sept. 11, 1942. 3 claims. (Cl. 229-40).

2,346,812. Method of making coated paper. Donald B. Bradner, assignor to The Champion Paper and Fibre Company, Hamilton, Ohio. Filed Aug. 2, 1940. 7 claims. (Cl. 117-65). The coating material is a solution of a protein adhesive, ammonia and a metallic compound (zinc, copper, or cadmium); the coated side of the paper is contacted with a casting surface while the coating is wet and dried in contact with the casting surface, with the removal of the ammonia.

2,346,828. Package for carbon paper. Edward W. Curtis, Jr., assignor to Underwood Elliott Fisher Company, New York, N. Y. Filed Dec. 31, 1941. 2 claims. (Cl. 206-63).

2,346,903. Web roll controlling mechanism. Charles S. Caffrey, assignor to Woods Newspaper Machinery Corporation, Plainfield, N. J. Filed May 17, 1940. 12 claims. (Cl. 242-75). Rewinder.

2,346,934. Impregnated fibrous material. Abraham B. Miller, assignor to Hercules Powder Company, Wilmington, Del. Filed March 25, 1941. 6 claims. (Cl. 117-91). The fibrous material is impregnated with a liquid rosin ester (abietic or hydrogenated abietic acid) and then with an asphaltic material.

2,346,943. Fiberboard composition. Fritz Rosenthal, assignor to The University of Tennessee Research Corporation, Knoxville, Tenn. Filed April 19, 1941. 5 claims. (Cl. 18-47.5). Cottonseed hulls are comminuted to about 100 mesh, a small percentage of hull fiber added, the mixture treated with a phenolic resin and subjected to heat and pressure.

2,346,945. Pulp consistency testing apparatus. Edward W. Samson and Alfred H. Croup, assignors to Hammermill Paper Company, Erie, Pa. Filed Sept. 16, 1941. 1 claim. (Cl. 73-51).

2,346,947. Method of saturating felted fibrous material. Raymond F. Schlaanstine, assignor to Hercules Powder Company, Wilmington, Del. Filed March 25, 1941. 2 claims. (Cl. 117-140). Felted fibrous material (cellulose, wool, or asbestos) is saturated with asphalt containing 1-10% of a lower aliphatic monohydric alcohol ester of abietic or hydrogenated abietic acid.

2,346,999. Manufacture of composite wallboard. John Briscoe and Victor Lefebure, assignors to Imperial Chemical Industries Limited, London, England. Filed Oct. 15, 1941.

32 claims. (Cl. 154-2). A plasterboard consists of a set core of a water-setting cementitious material and a liner bonded to the core by a coating comprising of a water-setting cementitious material and a water-diffusable adhesive.

2,347,047. Printing method and paper for use therein. Albert E. Gessler and Dominic J. Bernardi, assignors to Interchemical Corporation, New York, N. Y. Filed Aug. 31, 1940. 2 claims. (Cl. 117-38). A method of producing high finish printing on porous newspaper stock (20-40 pounds to the ream), by the use of a coating of alkali silicate.

2,347,075. Envelope or similar container for use in connection with C.O.D. transactions. Eugene B. Berkowitz, assignor to Berkowitz Envelope Company, Kansas City, Mo. Filed Aug. 3, 1942. 9 claims. (Cl. 229-70).

2,347,130. Inlet system for paper machines. Frederick S. Seaborne ,assignor to Paper Patents Company, Neenah, Wis. Filed Jan. 29, 1941. 2 claims. (Cl. 92-44). An improved conduit system connecting the inlet pump and the stock discharge opening of a closed stock inlet installation.

2,347,147. Clarification of white water by froth flotation. Robert B. Booth, assignor to American Cyanamid Company, New York, N. Y. Filed May 28, 1942. 4 claims. (Cl. 209-167). The flotation agent is a higher fatty acid, a rosin acid, tall oil and its soaps, or black liquor soap; filler and fiber are recovered.

2,347,161. Carton for ice-cream cones. Warren S. Watts and George J. Losson, assignors to Eskimo Pie Corporation, Bloomfield, N. J. Filed Dec. 12, 1940. 1 claim. (Cl. 229-22).

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2,347,183. Container. Walton B. Crane, assignor to Alpak, Los Angeles, Calif. Filed Feb. 16, 1942. 2 claims. (Cl. 229-28).

2,347,227. Container making machinery. Joseph F. Wilgus, assignor to American Can Company, New York, N. Y. Filed March 7, 1941. 4 claims. (Cl. 91-16). A machine for applying adhesive and printing upon a web of material.

2,347,236. Container. Cesare Barbieri, assignor to Dixie Cup Company, New York, N. Y. Filed May 5, 1941. 6 claims. (Cl. 229-4.5). A flat-bottom paper cup.

2,347,250. Shingle and method of making the same. Clinton B. Burnett, assignor to Johns-Manville Corporation, New York, N. Y. Filed March 19, 1941. 8 claims. (Cl. 117-30).

2,347,254. Sheet scoring and severing machine. George D. Cox, assignor to Williams and Marcus Company, Philadelphia, Pa. Filed Aug. 4, 1942. 22 claims. (Cl. 164-61). Mechanism for scoring individual sheets of paper and cutting them into a plurality of smaller sections.

2,347,417. Closure for containers in general. Guillermo E. C. Kraft, assignor to Guillermo Kraft Limitada Sociedad Anonima de Impresiones Generales, Buenos Aires, Argentine Republic. Filed Aug. 22, 1942. 2 claims. (Cl. 229-43).

2,347,419. Manufacture of corrugated paperboard and the like. James G. Lander, assignor to Diamond Alkali Company, Pittsburgh, Pa. Filed Dec. 5, 1941. 2 claims. (Cl. 106-74). A silicate composition contains a small percentage of aromatic monosodium sulphonate derived from petroleum oil.

2,347,422. Octagonal box. Gaylord Loth, assignor to The Hinde & Dauch Paper Company, Sandusky, Ohio. Filed May 18, 1943. 3 claims. (Cl. 229-41).

2,347,439. Method of and apparatus for making containers. James J. Shea, William F. Irrgang and Willard E. Swift, Jr., assignors to United States Envelope Company, Springfield, Mass. Filed Sept. 21, 1939. 3 claims. (Cl. 93-18).

2,347,445. Adhesive applying apparatus. George W. von Hofe, assignor to New Jersey Machine Corporation, Hoboken, N. J. Filed Sept. 13, 1941. 4 claims. (Cl. 91-50). A labeling machine.

2,347,504. Washing of paper pulp and the like. William H. Porritt, assignor to Becker Partington & Company Limited, London, England. Filed Sept. 11, 1941. 8 claims. (Cl. 68-55). An apparatus is claimed.

2,347,509. Method of making packages. Leroy L. Salfisberg, assignor to Ivers-Lee Company, Newark, N. J. Filed Feb. 25, 1942. 2 claims. (Cl. 93-3).

2,347,555. Fibrous sheet conditioning machine. Robert H. Greene, Marion, Ind. Filed June 15, 1942. 12 claims. (Cl. 91-55). The machine consists of a series of live steam applicator units mounted to form a bank.

2,347,566. Laminated body. Erwin Komenda; vested in the Alien Property Custodian. Filed May 13, 1939. 2 claims. (Cl. 154-45.9).

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2,347,643. Continuous method for producing adhesive tape. Gustave Schieman, assignor to International Plastic Corporation, Morristown, N. J. Filed Nov. 26, 1942. 1 claim. (Cl. 117-68.5).

2,347,662. Resin bonded abrasive sheet material. Richard P. Carlton and Byron J. Oakes, assignors to Minnesota Mining & Manufacturing Company, St. Paul, Minn. Filed Jan. 27, 1934. 18 claims. (Cl. 51-298). The abrasive is bonded to a backing sheet by a synthetic resin.

2,347,673. Valve bag. James F. Doyle, assignor to Arkell Safety Bag Company, New York, N. Y. Filed Feb. 6, 1941. 2 claims. (Cl. 150-9).

2,347,686. Container. John M. Hothersall, assignor to American Can Company, New York, N. Y. Filed Dec. 7, 1940. 1 claim. (Cl. 229-7). A single service tamperproof fiber container.

2,347,687. Container. John M. Hothersall, assignor to American Can Company, New York, N. Y. Filed Dec. 12, 1940. 1 claim. (Cl. 220-27). A tamperpoof container.

2,347,716. Apparatus for screening paper stock. Stephen A. Staege, assignor to The Black-Clawson Company, Hamilton, Ohio. Filed July 19, 1939. 7 claims. (Cl. 92-34). A vertical screen which is cleaned by the scraping action of blade up to 30-45 times per second.

2,347,717. Paper machine stock inlet. Stephen A. Staege, assignor to The Black-Clawson Company, Hamilton, Ohio. Filed Aug. 26, 1940. 12 claims. (Cl. 92-44). A conduit box having a partition wall with means for circulating the stock between the two parts.

2,347,719. Container. Edward O. Then, assignor to American Can Company, New York, N. Y. Filed July 8, 1939. 2 claims. (Cl. 220-36). A hinged tablet box and the like.

2,347,724. Container. Richard J. White, assignor to American Can Company, New York, N. Y. Filed Sept. 16, 1939. 1 claim. (Cl. 220-36). A hinged tablet box.

2,347,725. Wall and closure support. Philip Zalkine, New York, N. Y. Filed Dec. 31, 1938. 1 claim. (Cl. 229-37).

2,347,850. Paper machinery. Stephen A. Staege, assignor to The Black-Clawson Company, Hamilton, Ohio. Filed May 25, 1940. 2 claims. (Cl. 92-38). A method of screening paper pulp.

2,347,893. Apparatus for web alignment. Charles A. Dickhaut, assignor to John Waldron Corporation, New Brunswick, N. J. Filed Nov. 9, 1942. 12 claims. (Cl. 242-76).

2,347,902. Bag making machine and method. Rene J. Gaubert, assignor to Simplex Wrapping Machine Co., Oakland, Calif. Filed Nov. 6, 1940. 22 claims. (Cl. 93-18). Machine for making bags from cellophane and the like.

2,348,070. Carton. William H. Inman, assignor to Bloomer Bros. Company, Newark, N. Y. Filed Aug. 20, 1942. 14 claims. (Cl. 229-16). A carton formed of waxed fibrous sheet material.

2,348,081. Compressed cellulosic product and method of making same. Harry K. Linzell, assignor to United States Gypsum Company, Chicago, Ill. Filed Jan. 24, 1941. 22 claims. (Cl. 18-47.5). In the manufacture of hardboard from lignocellulosic material, the blanks are heated in steam at 350-600° F. to avoid oxidation and then pressed.

2,348,140. Container having a pouring spout. Eli H. Levin, Chicago, Ill. Filed Jan. 29, 1942. 1 claim. (Cl. 229-7).

2,348,162. Web spreader. Edgar Warner, assignor to The Champion Paper and Fibre Company, Hamilton, Ohio. Filed Aug. 25, 1941. 11 claims. (Cl. 271-2.1). A device for applying lateral tension to a moving web of paper.

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2,348,201. Manufacture of infusion packages with handles. Louis Barnett, assignor to National Urn Bag Co., Inc., Long Island City, N. Y. Filed July 12, 1941. 21 claims. (Cl. 93-3).

2,348,220. Adhesive paper. Bernard L. Kline, assignor to The Western Union Telegraph Company, New York, N. Y. Filed Jan. 10, 1941. 5 claims. (Cl. 117-122). A polyvinyl alcohol which is soluble in water at a temperature up to 70° C. is used.

2,348,272. Pulp product production. Lee M. Wiley, assignor of one-third each to Julian T. Lett and Reeley B. Wiley, Marion, Ind. Filed Sept. 9, 1940. 7 claims. (Cl. 18-56). A method of molding a flat blank of paper pulp.

2,348,284. Electrolytic capacitor. Frank S. Dunleavey, assignor to The Magnavox Company, Fort Wayne, Ind. Filed Aug. 14, 1939. 7 claims. (Cl. 138-78). The inner liner of a tubular article for enclosing an electrolytic capacitor consists of three layers—a cellulose derivative, a metal foil and a paper.

2,348,310. Container. Ben Rous, assignor to Federal Carton Corporation, New York, N. Y. Filed June 20, 1942. 5 claims. (Cl. 229-17).

2,348,324. Wetproof cigarette paper. Allen M. Bond, Jr., assignor to Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed May 21, 1941. 4 claims. (Cl. 131-15). The paper is coated with 0.05-0.2 pound of dry aluminum stearate per 1000 sq. ft. of cigarette paper.

2,348,340. Suction roll. John E. Goodwillie and Earl E. Berry, assignors to Beloit Iron Works, Beloit, Wis. Filed Feb. 13, 1941. 8 claims. (Cl. 92-53).

2,348,345. Press roll drive. Lloyd Hornbostel, assignor to Beloit Iron Works, Beloit, Wis. Filed May 8, 1941. 2 claims. (Cl. 92-49).

2,348,37. Carton. Charles H. Goodyear, assignor to Fibreboard Products, Inc., San Francisco, Calif. Filed May 24, 1940. 1 claim. (Cl. 229-51). A carton having spaced lines of weakness in walls to provide a tear strip.

2,348,378. Carton. Charles H. Goodyear, assignor to Fibreboard Products, Inc., San Francisco, Calif. Filed April 30, 1942. 1 claim. (Cl. 229-41).

2,348,433. Corrugated fibrocement slab. Giovanni Guerci, Turin, Italy; vested in the Alien Property Custodian. Filed Feb. 21, 1940. 2 claims. (Cl. 154-30). A machine for manufacturing corrugated fibrocement slabs.

2,348,551. Packaging. Desmond R. La Place, assignor to Bocjl Corporation, Pittsburgh, Pa. Filed April 8, 1941. 7 claims. (Cl. 229-47).

2,348,578. Method and apparatus for surfacing sheet material. John A. Soissa, assignor to Certain-Teed Products Corporation, New York, N. Y. Filed March 20, 1940. 7 claims. (Cl. 117-19). Method of surfacing a web with granular material of different colors.

2,348,685. Tub size for paper. Rolland D. Smith and Herbert F. Gardner, assignors to Stein, Hall Manufacturing Company, Chicago, Ill. Filed May 29, 1940. 7 claims. (Cl. 127-33). Starch is heated in an aqueous medium with 0.25-2% of sodium perborate, and 1-3% of borax to about 200° F. until no further change in viscosity occurs.

2,348,686. Paper. Clarence F. Van Epps, assignor to The Lauxite Corporation, Lockport, N. Y. Filed March 27, 1940. 2 claims. (Cl. 95-8). Paper is sized with urea-formaldehyde (and 1% aluminum sulphate) and coated with a light sensitive material; the paper is nonabsorbent to water and noncurling.

2,348,687. Composition for coating and laminating sheet materials. Allen Abrams, George W. Forcey, Winfred H. Graebner, Alfred M. Heald, and George G. Rumberger, assignors to Marathon Paper Mills Company, Rothschild, Wis. Filed Nov. 30, 1942. 16 claims. (Cl. 106-219). The coating comprises a major proportion of microcrystalline wax and an aluminum soap of a higher fatty acid.

2,348,688. Heat-sealable label. Allen Abrams, George W. Forcey, Winfred H. Graebner, Alfred M. Heald, and George G. Rumberger, assignors to Marathon Paper Mills Company, Rothschild, Wis. Filed Nov. 30, 1942. 7 claims. (Cl. 117-122). The label is coated with a mixture of microcrystalline wax, about 4-10% of an aluminum salt of a higher fatty acid, and 3-10% of ester gum.

2,348,689. Container. Allen Abrams, Donald W. Davis, George W. Forcey, George G. Rumberger and Charley L. Wagner, assignors to Marathon Paper Mills Company, Rothschild, Wis. Filed Nov. 30, 1942. 8 claims. (Cl. 99-178). A container for packaging hot flowable materials congealable upon cooling is formed of boards coated with microcrystalline wax.

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2,348,725. Molded fiber article. Charles J. Chaplin, assignor to Chaplin Corporation, Portland, Maine. Filed Dec. 4, 1940. 4 claims. (Cl. 229-2.5).

2,348,804. Method of manufacturing asbestos-cement shingles or the like. William Gerity, assignor to The Patent and Licensing Corporation, New York, N. Y. Filed April 11, 1940. 11 claims. (Cl. 92-39). The wet slurry of cement and asbestos fiber is maintained at 110-20° F., wet plies are formed by dewatering and the plies are laminated while wet.

2,348,817. Board finish apparatus. Fergus A. Irvine, assignor to The Celotex Corporation, Chicago, Ill. Filed Feb. 5, 1941. 2 claims. (Cl. 91-25). Apparatus for applying a surfacing coating to fiber insulation board.

2,348,864. Machine for applying and drying adhesives on paper goods. Edwin G. Staude, Minneapolis, Minn. Filed April 6, 1942. 18 claims. (Cl. 91-18). A sealing flap gumming and drying mechanism for an envelope making machine.

2,348,871. Sheet pulp forming apparatus. Lee M. Wiley, assignor one-third each to Julian T. Lett and Reeley B. Wiley, Marion, Ind. Filed Feb. 1, 1940. 12 claims. (Cl. 18-19). A container forming machine.

2,348,970. Process for the separation of acids contained in tall oil. Frederick H. Gayer and Charles E. Fawkes, assignors to Continental Research Corporation, Chicago Heights, Ill. Filed April 7, 1942. 10 claims. (Cl. 260-97.5). The fatty acids are converted into their alkyl esters, the resin acids are partially converted into their soaps and the esters are extracted with a solvent.

2,348,971. Process for the separation of the constituents of tall oil. Frederick H. Gayer and Charles E. Fawkes, assignors to Continental Research Corporation, Chicago Heights, Ill.

Filed April 7, 1942. 15 claims. (Cl. 260-97.5). The method is essentially the same as that of the preceding patent, except that a neutral salt is added before the extraction of the fatty acids.

2,348,991. Glue applying device in gluing machines. Gottfried Maurer, assignor to A. Müller & Cie, Maschinenfabrik und Eisengiesserei Aktiengesellschaft, Brugg, Switzerland. Filed Dec. 13, 1940. 6 claims. (Cl. 91-47).

2,349,020. Carton. Edgerton A. Throckmorton, assignor to Container Corporation of America, Chicago, Ill. Filed Aug. 15, 1941. 5 claims. (Cl. 229-89). A carton for bottles and the like.

2,349,056. Envelope folding and gluing machine. Kiichi Serai, assignor to Hawaiian Pineapple Company, Limited, Honolulu, Territory of Hawaii. Filed Aug. 8, 1942. 9 claims. (Cl. 93-63).

2,349,088. Carton. Reynolds Guyer, assignor to Waldorf Paper Products Company, St. Paul, Minn. Filed May 13, 1940. 1 claim. (Cl. 229-23).

2,349,111. Method of making flexible bags. Adolf Rambold, Dresden, Germany; vested in the Alien Property Custodian. Filed May 31, 1941. 9 claims. (Cl. 93-35).

2,349,204. Paper box machine. Edwin G. Staude, Minneapolis, Minn. Filed Aug. 4, 1941. 19 claims. (Cl. 93-49). A gluing and folding machine.

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2,349,234. Envelope. Lee Barker, Los Angeles, Calif. Filed Nov. 20, 1943. 4 claims. (Cl. 229-68).

2,349,238. Receptacle. Philip H. Burre, South Ozone Park, N. Y. Filed Nov. 28, 1942. 13 claims. (Cl. 4-271).

2,349,241. Carton. Edwin L. Arneson, assignor to Morris Paper Mills, Chicago, Ill. Filed July 3, 1942. 7 claims. (Cl. 229-37).

2,349,247. Bag closure. Philip S. Coghill, assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed Aug. 23, 1941. 4 claims. (Cl. 229-62).

2,349,303. Coating machine. Nicholas Pelosi, assignor to American Can Company, New York, N. Y. Filed Aug. 22, 1940. 6 claims. (Cl. 226-20). Machine for coating containers with paraffin and the like.

2,349,312. Container manufacture. Walter E. Sooy and Rudolf W. von Sydow, assignors to Continental Can Company, Inc., New York, N. Y. Filed Dec. 18, 1939. 15 claims. (Cl. 93-81). Manufacture of multiwall convolutely wound container bodies.

2,349,336. Cutting blade and method of cutting therewith. James W. Batchelder, assignor to The Fred Goat Co., Inc., Brooklyn, N. Y. Filed April 23, 1940. 2 claims. (Cl. 164-70). A method for sharply severing a traveling web of paper board.

2,349,362. Container. Donald E. Marshall, assignor to Colgate-Palmolive-Peet Company, Jersey City, N. J. Filed Oct. 24, 1941. 10 claims. (Cl. 229-17).

2,349,364. Chick shipping box. Richard C. Marshall, Jr., assignor to Crook Paper Box Company, North Kansas City, Mo. Filed June 12, 1942. 1 claim. (Cl. 229-15).

2,349,369. Bag closure. Wilbur H. Norseen, assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed Aug. 22, 1941. 3 claims. (Cl. 229-62).

2,349,455. Apparatus for internally coating containers. Eric P. Olson, assignor to The Diamond Match Company, New York, N. Y. Filed March 18, 1943. 15 claims. (Cl. 91-37).

2,349,589. Carton. Bertie S. Harrington, assignor to Armour and Company, Chicago, Ill. Filed March 25, 1942. 2 claims. (Cl. 229-22).

2,349,605. Dispensing container. Walter A. Becker, assignor to Old Dominion Box Company, Lynchburg, Va. Filed Jan. 1, 1943. 6 claims. (Cl. 229-17).

2,349,698. Fiberboard. Ernest R. Boller and Raymond F. Remler, assignors to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed July 1, 1941. 2 claims. (Cl. 154-33.05). One or both sides of a board is treated with sodium silicate, so that the ratio between the percentage of silicate in the outside 0.002 inch and the next lower 0.002 inch is from 1.2 to 3.0. About 1-5 pounds of 40° Bé solution are applied per 1000 square feet. The board is finally corrugated.

2,349,704. Paper with improved surface. John W. Clark, assignor to S. D. Warren Company, Boston, Mass. Filed July 12, 1939. 12 claims. (Cl. 92-68). Paper is abrasively buffed, in the direction of the grain of the paper, by means of a polishing composition (a powdered abrasive and a deformable carrier therefor). The buffed product has a gloss at least 10 points higher than if the paper had been supercalendered; it is less penetrable to varnish.

2,349,707. Container lock. Julian D'Esposito, assignor to Container Corporation of America, Chicago, Ill. Filed Sept. 19, 1942. 6 claims. (Cl. 229-39).

2,349,732. Method of sealing the mouths of bags. Stanley R. Howard, assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass. Filed May 15, 1940. 7 claims. (Cl. 226-56).

2,349,748. Dispensing container or carton. Herman E. Otto, assignor to Cooper Paper Box Corporation, Buffalo, N. Y. Filed Nov. 5, 1942. 7 claims. (Cl. 229-17).

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R22,487. Molded article and method of making it. William W. Carter, by Brayton Morton, Westport, Mass., as trustee. Original No. 2,237,048, dated April 1, 1941. Application for reissue March 30, 1943. 5 claims. (Cl. 229-3.5). A resin-bearing molded fibrous pulp article of dish shape.

R22,490. Bag. Adolf Rambold, Dresden, Germany; vested in the Alien Property Custodian. Original No. 2,085,509, dated June 29, 1937. Reissue No. 21,714, dated Feb. 11, 1941. Application for reissue July 2, 1941. 5 claims. (Cl. 229-53).

2,350,058. Method and apparatus for testing the porosity of sheet materials. Richard W. May, assignor to W. & L. E. Gurley, Troy, N. Y. Filed Dec. 23, 1940. 6 claims. (Cl. 73-51).

2,350,132. Bag and method of making the same. Howard Rohdin, Glen Ridge, N. J. Filed Nov. 18, 1941. 8 claims. (Cl. 93-35).

2,350,163. Merchandise container. Reynolds Guyer, assignor to Waldorf Paper Products Company, St. Paul, Minn. Filed June 18, 1941. 6 claims. (Cl. 206-44).

2,350,214. Container. Henry E. Braloff, Rockville Centre, N. Y. Filed Dec. 29, 1942. 7 claims. (Cl. 229-14).

2,350,232. Carton. Harry E. Hines, assignor to Consolidated Paper Company, Monroe, Mich. Filed Feb. 14, 1942. 8 claims. (Cl. 229-5.5).

2,350,262. Carton. Robert Van Rosen, assignor to I. Makowsky Corporation, New York, N. Y. Filed Oct. 8, 1943. 8 claims. (Cl. 229-16).

2,350,271. Container. Henry E. Brakoff, Rockville Centre, N. Y. Filed May 22, 1942. 6 claims. (Cl. 229-4.5).

2,350,278. Apparatus for forming cartons. Harry E. Hines, assignor to Consolidated Paper Company, Monroe, Mich. Filed Jan. 29, 1940. 24 claims. (Cl. 93-55.1). A stapling mechanism for tubular containers.

2,350,292. Coated sheet and method of producing the same. John P. Sermattei and Cecil M. Rhodes, assignors to Rapinwax Paper Company, Minneapolis, Minn. Filed Feb. 20, 1941. 17 claims. (Cl. 117-66). To prepare a transparent moistureproof material a base sheet is impregnated with from 20-40% of a cellulose ether, resin, and at least 20% of spermaceti in a suitable solvent, the solvents are removed at an elevated temperature ,the sheet chilled and humidified.

2,350,312. Can closure and method of making the same. Alexander G. Hatch, assignor to Fibre Can Machinery Corporation, Rutland, Vt. Filed Feb. 10, 1943. 1 claim. (Cl. 229-5.5).

June 6, 1944

2,350,336. Treatment of cellulosic sheet materials. Jordan V. Bauer and Don M. Hawley, assignors to Stein, Hall Manufacturing Company, Chicago, Ill. Filed April 29, 1938. 3 claims. (Cl. 154-33.05). In the manufacture of corrugated board the opposite sides of the corrugating medium are treated with an acid solution and a water-soluble urea-formaldehyde reaction product, winding the material while wet in a form of a roll, allowing it to stand until the reaction is complete, and then corrugating the material.

2,350,363. Insulating covering. Robert F. Massa, New York, N. Y. Filed April 11, 1941. 6 claims. (Cl. 154-44). A heat insulator.

2,350,366. Moisture-resistant cellophane. James A. Mitchell, assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed March 28, 1942. 5 claims. (Cl. 117-145). The moisture-proof composition consists essentially of 3-50% wax and cementing material therefore (cyclized rubber containing 0.5-50% of phenol formaldehyde piperazine resin).

2,350,418. Apparatus for producing filled packages. Norman S. Ross, assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass. Filed Aug. 16, 1941. 13 claims. (Cl. 93-6). Means for cutting the uncut top closing flaps of the container down to the level of the material after the container has been filled.

2,350,548. Asphaltic emulsion. William W. De Laney, assignor to Hercules Powder Company, Wilmington, Del. Filed Oct. 25, 1940. 7 claims. (Cl. 252-311.5). The emulsifier consists of 50-80% of an alkali metal soap of pine wood resin and 50-20% of an alkali metal soap from tall oil, vegetable oils, animal oils, and rosin.

2,350,649. Method for asphalt saturation. Wallace E. Spelshouse and Arthur H. Boenau, assignors to Socony-Vacuum Oil Company, Incorporated, New York, N. Y. Filed July 2, 1941. 5 claims. (Cl. 117-168). An asphalt saturant is proposed, the use of which prevents excessive foaming during the saturation of moisture-containing fibrous materials.

2,350,690. Machine for use in the manufacture of cartons. William T. Martin, assignor to Beech-Nut Packing Company, Canajoharie, N. Y. Filed Jan. 8, 1942. 4 claims. (Cl. 93-36).

2,350,694. Bag-closing device. Marcel A. Nicolas, assignor to Consolidated Packaging Machinery Corporation, Buffalo, N. Y. Filed Nov. 5, 1942. 9 claims. (Cl. 91-47). An adhesive-handling apparatus.

2,350,732. Coating composition and adhesive resulting therefrom. Richard G. Drew, assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn. Filed June 10, 1933. 1 claim. (Cl. 106-287). A water-insoluble, unsaponifiable, readily volatile organic liquid is emulsified with an aqueous adhesive.

2,350,874. Apparatus for manufacturing open containers made of pliable sheet material. Erich K. Buxbaum, London, England. Filed Aug. 14, 1941. 15 claims. (Cl. 93-51).

2,350,925. Container. George A. Ramsden and George J. R. Ramsden, Lambeth, Ontario, Canada. Filed May 14, 1941. 11 claims. (Cl. 222-456).

2,350,930. Machine for making and filling packages. Leroy L. Salfisberg, assignor to Ivers-Lee Company, Newark, N. J. Filed Jan. 1, 1942. 22 claims. (Cl. 93-3).

2,350,932. Chick box structure. Norbert F. Schaefer, assignor to Anderson Box Company, Indianapolis, Ind. Filed Jan. 31, 1942. 1 claim. (Cl. 229-32).

2,350,950. Fibrous, covered container. Lee M. Wiley, Marion, Ind. Filed May 21, 1943. 4 claims. (Cl. 229-43).

2,350,953. Process of preparing protein compositions. Walter M. Bain and Arthur W. Neubauer, assignors to The Glidden Company, Cleveland, Ohio. Filed June 8, 1942. 15 claims. (Cl. 106-146). A commercially pure alkali-soluble protein is dissolved in an aqueous alkaline medium at a relatively low pH and mixed with a proteinaceous vegetable seed flour dispersed in an alkaline medium, the resulting pH being above pH but substantially below that required for complete dispersion of the flour.

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2,350,991. Blueprint sensitizer. Clyde A. Crowley and George H. Goodyear, assignors to The Huey Co., Chicago, Ill. Filed Aug. 16, 1941. 21 claims. (Cl. 95-6). A mixture of a ferrocyanide, a ferricyanide, a light-sensitive ferric compound and non-pigment-forming substances is used.

2,351,048. Screen for paper stock and the like. Otto Imset, Skoyen, near Oslo, Norway; vested in the Alien Property Custodian. Filed Nov. 4, 1939. 2 claims. (Cl. 92-32).

2,351,109. Bottle labeling adhesive. John F. Corwin and Robert C. White, assignors to The Borden Company, New York, N. Y. Filed Sept. 17, 1941. 7 claims. (Cl. 106-146). This is a mixture of casein, an organic amide, a zinc compound, and an alkaline solvent.

2,351,165. Carton. Robert W. Vergobbi, assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass. Filed July 24, 1940. 6 claims. (Cl. 229-37).

2,351,166. Carton. Robert W. Vergobbi, assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass. Filed Sept. 2, 1942. 5 claims. (Cl. 229-37).

2,351,309. Bottle label adhesive. Robert C. White, assignor to The Borden Company, New York, N. Y. Filed Feb. 24, 1943. 6 claims. (Cl. 106-146). The adhesive consists of casein, an organic amide, a zinc compound, and a water-soluble alkaline solvent.

2,351,318. Container and closure cap therefor. Herman Carew, assignor to Dixie Cup Company, Chicago, Ill. Filed July 30, 1940. 4 claims. (Cl. 229-5.5).

2,351,417. Carton. George K. S. Ferguson, assignor to The Baltimore Paper Box Company, Baltimore, Md. Filed June 2, 1942. 8 claims. (Cl. 229-6).

2,351,469. Container for match books and the like. Edgar A. Allen, assignor to The Diamond Match Company, New York, N. Y. Filed Feb. 16, 1943. 2 claims. (Cl. 229-6).

2,351,470. Self-dispensing package. Walter E. Amberg, assignor to Universal Paper Products Company, Chicago, Ill. Filed March 7, 1941. 6 claims. (Cl. 206-56). A carton for dispensing paper cups.

2,351,492. Method and apparatus for treating paper stock. Edwin Cowles, assignor to The Cowles Company, Princeton, N. J. Filed Jan. 15, 1940. 13 claims. (Cl. 92-26). A method of pulping paper stock in batches, with defiberizing action at the bottom of the vortex.

June 20, 1944

2,351,643. Cigarette paper booklet. Harry H. Straus, assignor to Champagne Paper Corporation, Asheville, N. C. Filed Sept. 30, 1941. 4 claims. (Cl. 206-57).

2,351,670. Folding and gluing apparatus. Charles Desch and Walter Yomantas, assignors to Container Corporation of America, Chicago, Ill. Filed Aug. 12, 1942. 5 claims. (Cl. 93-49).

2,351,683. Manufacture of calcium carbonate adhesive coatings. Ausker E. Hughes, Harold B. Browne, and Howard F. Roderick, assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Oct. 12, 1940. 9 claims. (Cl. 106-148). A slurry of 20-70% of calcium carbonate and 1-5% of casein or alpha protein is subjected to mechanical attrition to reduce the viscosity.

2,351,716. Coating composition and method of making. Robert L. Smith, assignor to The Carborundum Company, Niagara Falls, N. Y. Filed Dec. 16, 1938. 9 claims. (Cl. 260-30). A liquid suspension of a solid fusible resin and a liquid reactive resin in water.

2,351,728. Continuous beater and pulp selector. Harold D. Wells, Glens Falls, N. Y. Filed Aug. 8, 1942. 7 claims. (Cl. 92-23). A beating and circulating tank.

2,351,733. Drier control and drainage means. Adam E. Armstrong, assignor to Armstrong Machine Works, Three Rivers, Mich. Filed March 13, 1943. 9 claims. (Cl. 34-125).

2,351,780. Method of absorbing sulphur dioxide. George V. Palmrose, assignor to Weyerhaeuser Timber Company, Tacoma, Wash. Filed April 1, 1941. 10 claims. (Cl. 23-130). A method of producing magnesium bisulphite liquor by absorption of sulphur dioxide from gases containing about 1% of the dioxide.

2,351,804. Container. Jerome J. Blum, assignor to The Fibre Forming Corporation, Olean, N. Y. Filed April 10, 1940. 3 claims. (Cl. 206-3). A waterproof, rigid, fibrous container.

2,351,805. Sheet to make blank, printed, or written envelopes and the like. Claud Bonnaire, London, England. Filed May 20, 1941. 12 claims. (Cl. 93-61). A method of manufacturing a pile of superposed, staggered and connected envelopes.

2,351,812. Package. Reynolds Guyer, assignor to Waldorf Paper Products Company, St. Paul, Minn. Filed June 25, 1942. 18 claims. (Cl. 229-51).

2,351,825. Shipping case. John K. Limbert, assignor to Central Fibre Products Company, Inc., Chicago, Ill. Filed Jan. 22, 1943. 9 claims. (Cl. 229-45).

2,351,902. Control system for papermaking apparatus. Rest R. Baker, assignor to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Filed Jan. 8, 1943. 9 claims. (Cl. 92-73). A method for controlling drier and calender rolls.

2,351,949. Heat-treated rosin size. Edmund A. Georgi, assignor to Hercules Powder Company, Wilmington, Del. Filed Aug. 14, 1942. 15 claims. (Cl. 260-105). An alkali metal salt of rosin is heated with water at 250-350° C. for 10 minutes to 3 hours and at a pressure of 500 to 2500 pounds per square inch.

JUNE 27, 1944

2,352,293. Papermaking. John C. Sherman, assignor to A. P. W. Paper Co., Inc., Albany, N. Y. Filed Jan. 10, 1940. 2 claims. (Cl. 154-50). A composite paper comprises outer sheets of kraft paper, an intermediate film of bibulous wet-strengthened paper absorptive to asphalt, and asphalt films between the layers to bind them together.

2,352,369. Container making machine. Herman Carew, assignor to Dixie Cup Company, Chicago, Ill. Filed Aug. 12, 1938. 43 claims. (Cl. 93-36.1).

2,352,393. Collapsible paperboard receptacle. George N. Lee, assignor to Brett Lithographing Co., Long Island City, N. Y. Filed June 30, 1941. 7 claims. (Cl. 206-44).

2,352,444. Method of preparing newsprint paper for use as pencil sheaths. Kay Miller, assignor to Joseph Dixon Crucible Company, Jersey City, N. J. Filed Jan. 16, 1942. 5 claims. (Cl. 93-1). Method of heat treating newsprint to render it suitable for use as pencil sheaths.

2,352,503. Container. Richard R. Walton, assignor of one-half to Container Corporation of America, Chicago, Ill., and one-half to Dewey & Almy Chemical Company, Cambridge, Mass. Filed April 16, 1941. 25 claims. (Cl. 229-14).

2,352,547. Refining of tall oil. John D. Jenkins, assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa. Filed Dec. 19, 1941. 1 claim. (Cl. 260-97.5). The tall oil is dissolved in a solvent from the group of monoethyl ether of ethylene glycol and diacetone alcohol and crystallizing out the resin acids.

2,352,553. Method of making composite boards. Victor Lefebure, assignor to Imperial Chemical Industries, Limited, London, England. Filed March 30, 1938. 13 claims. (Cl. 154-2). A method of manufacturing a plasterboard.

2,352,559. Closure or sealing means for paper or cardboard receptacles. William Marcus, New York, and Albert Baum, Brooklyn, N. Y. Filed April 29, 1A942. 2 claims. (Cl. 229-84).

The Inter-Society Color Council

Annual Report of TAPPI Delegates

By John L. Parsons[1]

During 1943 the committee work of the Council has been limited to projects related to the war effort. The Color Aptitude Test Committee has completed its study of the preliminary material and has prepared a new and improved test. The Subcommittee on Color Blindness has extended its interests to include not only the single-judgment form of red-green discrimination tests requested by the Navy Department, but also an anomaloscope form of test and a form of pseudo-isochromatic charts which it is believed can be made cheat-proof.

The specification of color tolerances was the subject selected for the 1944 annual meeting discussion session.

Six issues of the *News Letter*, publication of the Inter-Society Color Council, appeared in 1943. These mimeographed bulletins, Nos. 45-50, inclusive, totaled 82 pages. The last issue contains an index of articles published during the year. Featured articles were (1) the bibliography on color (issues Nos. 45-48) and (2) an outline of color history (issues Nos. 48-50).

For the March 1943 meeting of the Optical Society of America, the Inter-Society Color Council arranged a symposium on color blindness. Three contributions related to the background of the subject and five were devoted to current developments in the field. Reprints of the following symposium papers were cent to all delegates:

1. Foreword, by Dorothy Nickerson.
2. Facts of Color Blindness, by Deane B. Judd.
3. Methodology in Test Preparation, by F. L. Dimmick.
4. Evolution of Color Vision Tests, by Elsie Murray.
5. Single Judgment Test for Red-Green Discrimination, by LeGrand H. Hardy.
6. Farnsworth-Munsell 100-Hue and Dichotomous Tests, by Dean Farnsworth.

The 1944-45 officers of the Council are: Chairman — Michael J. Zigler; Vice-Chairman — Ralph M. Evans; Secretary— Dorothy Nickerson; Treasurer— Norman Macbeth and Counsellors: Wilford S. Conrow, Deane B. Judd, and Francis Scofield.

TAPPI delegates to the Council include: J. d'A. Clark, M. N. Davis, Helen U. Kiely, H. W. Morgan, B. W. Scribner, E. Sutermeister, J. L. Parsons, and R. G. Macdonald.

Members of TAPPI desiring information on color, or wishing to borrow Council publications, are invited to send their requests to the headquarters of the Association, 122 East 42nd Street, New York 17, N. Y.

[1]Member TAPPI; Chairman, TAPPI Delegates to I-SCC; Research Chemist, Hammermill Paper Co., Erie, Pa.

No Change in Newsprint Use

A committee of the Inland Daily Press Association, with offices in Chicago, has recommended to the WPB newspaper committee that no change be made in either the principle or percentages of the present graduated scale in L-240, covering newsprint use. J. W. Potter of the Rock Island, Illinois, Argus, was a member of the committee. The recommendation was based on the results of a questionnaire which show that in the matter of newsprint consumption for the first quarter of 1944 compared to the first quarter of 1941, 72 of the 125 newspapers reporting fall in the bracket of users of 25 to 125 tons a quarter, 31 in the bracket of users of 125 to 250 tons and 14 in the 250 to 500 ton bracket, indicating that the heaviest percentage of circulation increases in the country has fallen on the smaller newspapers; that the high percentage of these circulation increases going to military personnel throws a particularly heavy burden on the small papers; that in spite of these large circulation increases the survey shows that these papers have already borne their proportionate share in the conservation of newsprint.

Water Vapor Permeability of Sheet Materials at High Temperature and Humidity*

Tentative Standard TAPPI T 464 m-44

The influence of temperature and humidity on the water vapor transmission of most sheet materials is by no means linear, so that water vapor permeability test results obtained at lower temperatures and humidities (TAPPI Standard T 448 m), cannot be extrapolated, as a rule, to apply to hot, damp atmospheric conditions. This method describes a procedure by which the water vapor permeability of a sample is measured at 100° F. with a relative humidity of about 90% on one face of the sheet and below 5% on the other. The method is intended for the testing of paper and other sheet materials used for packaging.

There may be a considerable difference in the permeability of a sheet possessing two-sidedness, when one face is exposed to a high humidity and the other to a low humidity, and when the sheet is reversed. In general, unless the test is to be made in two directions the use requirement of the sheet will govern the exposure of the specimen; for example, a material used to enclose a dry product should be tested with the side designed to be the inner surface exposed to the dry atmosphere.

The test is made upon specimens either uncreased or creased in accordance with TAPPI Method T 465 sm. It is preferable to make both tests. Where only one result is desired, it is recommended that the test be made on a creased sample exposed in accordance with the manner in which it is to be used.

*This method has been approved as a tentative standard by the Paper Testing Committee. Criticisms are earnestly requested and should be sent to R. G. Macdonald, Secretary, Technical Association of the Pulp and Paper industry, 122 E. 42nd St., New York, N. Y. Reprints of this standard may be obtained from the Secretary at 25 cents each.

Apparatus

1. *Test Dishes.* Open-mouthed cups or dishes of such size and shape that each can be accommodated on the pan of an analytical balance. The area of the opening of the dishes should be as large as practical, an area of at least 60 sq. cm. being preferred. Each test dish shall bear an identifying number.

The test dishes shall be of such design that a satisfactory seal can be made to prevent leakage of water vapor at or through the edges of the sheet and clearly define the test area of the specimen. Suitable designs for the assembled dish with specimens are shown in Figures 1, 2, and 3. Other modifications of these

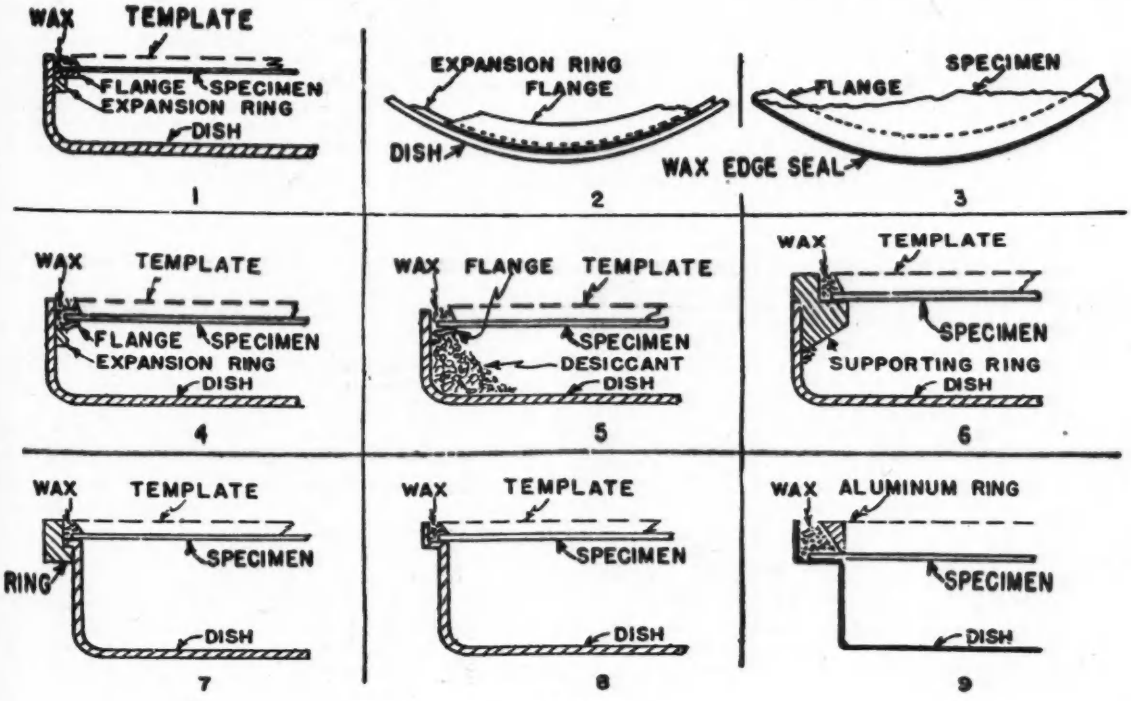

FIG. 1
Details of Test Dishes

designs may be made, provided that the principle is maintained of defining the test area and preventing edge leakage by means of a complete wax seal.

2. *Template,* for use in defining the test area and effecting the wax seal, consisting of a circular metal disk shown in Fig. 4 about 3/16 to ¼ inch thick, or a plate with an annular groove shown in Fig. 5 made from a suitable metal and having the edge of the circle defining the test area of the specimen bevelled to a suitable angle. Four templates are desirable to speed up the preparation of the test specimens.

3. *Circular Die or Template,* for cutting the specimen to the required size.

4. *Balance.* An analytical balance of at least 200-grams capacity, with large pans, and sensitive to 0.001 gram.

5. *Hot Plate,* for melting the wax employed in sealing the specimen.

6. *Pipet,* for applying the molten wax. A 25-ml. pipet with stem shortened to 2 inches both above and below the bulb and provided with a rubber bulb is suitable.

7. *High Relative Humidity Cabinet.* A cabinet wherein the circulating air is controlled at 100 ± 1° F. and 90 ± 2% relative humidity. The cabinet shall have suitable grills or racks to support the assembled specimen dishes, with means for circulating the conditioned air continuously over the exposed test specimens. The design of the cabinet shall be such as to avoid condensation in the vicinity of the test specimens during the test.

Note: High relative humidity cabinets are described in the literature *(1, 2, 3).* Care should be taken to ensure, by actual measurement, that the relative humidity of the air circulating over the test specimens is actually between 88 and 92% and that its temperature is between 99 and 101° F. during normal operation. Unless the test specimen assemblies can be weighed inside the cabinet, it is highly desirable to keep the cabinet, and do the weighing, in a constant temperature-humidity room —for example, at 73° F. and 50% R.H. The outside air temperature has a very appreciable effect on the humidity of the air in a cabinet which is controlled only by a thermostat and the circulation of the air over an exposed water surface.

If the design of the cabinet is such that it is necessary to remove the test specimen assemblies from the cabinet for weighing, covers for the specimens made substantially as in item 8 will serve to prevent appreciable change in the weight of the specimen assemblies during weighing.

8. *Weighing Covers.* Circular disks of aluminum 1/32 to 3/32 inch thick, each with a suitable knob in center for lifting. The edges of the covers fit over the test specimen when assembled and make contact with the inside bevelled surface of the annular wax ring just above the plane of the specimen. The sharp edges of the disks shall be carefully smoothed to avoid removing any wax and each cover shall be numbered to correspond with an individual test dish.

Materials

A. *Wax,* for sealing the specimen to the testing dish, made of a mixture of 60% of a suitable refined amorphous wax, (for example, Socony Vacuum Grade No. 2305) and 40% refined crystalline paraffin wax. The wax mixture should cling tenaciously to the surfaces and not be brittle at ordinary room temperatures. Care should be taken to prevent contamination of the wax with particles of calcium chloride or other salts when it is salvaged for reuse. The wax in use should be replaced frequently with new material. The stability and water absorption of the mixture should be tested by applying a heavy film of the wax about 10 square inches in area to a glass plate, exposing to the test atmosphere at high temperature and humidity and determining whether any significant change occurs in the weight of the film and plate—for example, more than 0.001 gram per day. Ordinary rosin as used in beeswax-resin mixtures will absorb a significant amount of moisture when so tested.

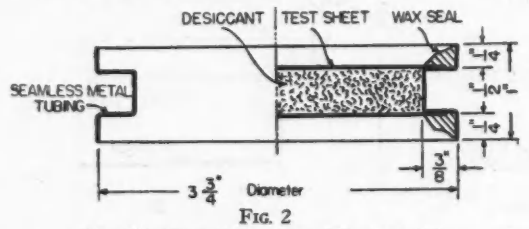

FIG. 2
Two Side Water Vapor Permeability Test Cell

FIG. 3
Assembled Cup Before Band of Scotch Tape Has Been Placed Around the Wax Bead

B. *Petrolatum,* for application to the edge of the template in order to facilitate removal of the latter after sealing the test sheet to the dish. The petroleum jelly commonly used by druggists is suitable.

C. *Desiccant.* A supply of anhydrous calcium chloride or anhydrous magnesium perchlorate in the form of small lumps which will pass a No. 8 screen, and free from fine material that will pass a No. 30 screen.

Definitions

For a sheet designed for a package to keep its contents from becoming moist, Side I shall be the surface which will face the outside of the package. If the package is designed to keep its contents moist, Side I shall be the surface designed to face the inside of the package. Side II in each case shall be the opposite side, the surface which faces the dryer condition. If the ultimate use of the sheet is not known, designate the surface to face the outside of the package as Side I. If one surface only is coated, add the word "coated." Thus: Side I (Coated) or Side II (Coated).

Test Specimen

The test specimens shall be representative of the material. At least two specimens shall be prepared for each type of test required.

The different types of test include: (1) Flat samples with Side I exposed to the high humidity; (2) Flat samples with Side II exposed to the high humidity; (3) and (4) Creased samples exposed as in (1) and (2).

Procedure

First, check the relative humidity of the cabinet. This is sometimes a difficult operation but, depending on the cabinet, may be performed with either a wet and dry bulb thermometer or a wet and dry contact

*Air at 100° F. and a relative humidity of 90% gives a wet bulb reading of 97.2° F.

thermocouple,* an electric hygrometer *(4)*, or more crudely, by exposing a crystallizing dish with a saturated solution and crystals of pure ammonium dihydrogen phosphate ($NH_4H_2PO_4$) in the cabinet and weighing the covered dish at intervals of two or three days. (No loss or gain of weight of the dish and contents at 100° F. indicates a relative humidity of approximately 91.5%). If the design of the cabinet is such that the inside of the outer wall condenses the vapor all over its surface, the temperature of the inner surface will approximate the dew point of the air in the cabinet. (Air at 100° F. and 90% relative humidity has a dew point of 92.0° F.)

Place sufficient desiccant in a clean test dish to cover the bottom evenly (about 50 cc. for a 5-inch diameter dish). Cut the test specimen to such a diameter that the edge of the specimen projects halfway over the groove or annular space of the testing dish to be filled with wax. Taking care not to damage the area for test, place the specimen over the aperture of the dish, centering it on the supporting ring or flange. Apply a thin film of petrolatum to the bevelled edge of the template and wipe off any surplus on the lower surface. Carefully place the template over the test specimen, taking care to have it exactly centered with the dish and specimen, so that when placing it in contact with the specimen the latter is not damaged. Flow molten wax into the annular space surrounding the bevelled template until the surface of the wax is level and almost but not quite flush with the top surface of the template and break any air bubbles present in the wax. Let the wax harden, then remove the template from the assembly.

Inspect the specimen assembly for flaws in the seal, and remove any loose pieces of wax or other material.

To use the template illustrated in Fig. 5, fill the desiccant into a suitable tray, center the specimen on the template and place the tray on the specimen. Place the inverted dish in position, make the wax seal as described, then invert the assembly.

To use the type of test dish illustrated in Fig. 3, seal one specimen in position, then invert the assembly, practically fill the desiccant space with the desiccant, taking care not to leave any powder on the sealing ledge, and seal the other specimen in position.

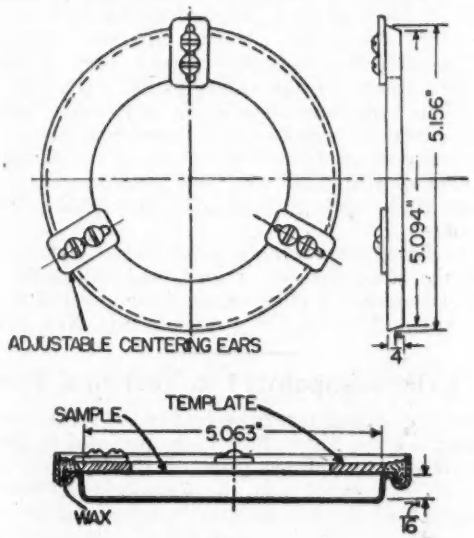

FIG. 4
Template and Test Dish Details

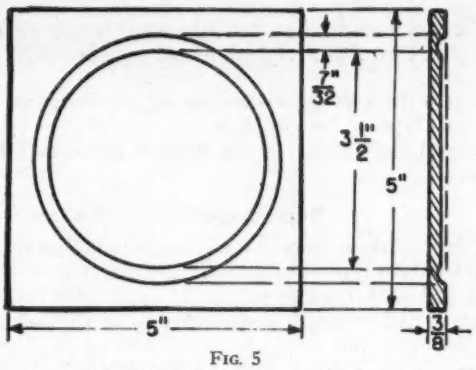

FIG. 5
Template Used in Sealing the Specimen to the Crystallizing Dish

Prepare the desired number of specimen assemblies for test and number each test dish. Place them on the shelves of the test cabinet at 100° F. and 90% relative humidity for a period of at least 16 hours. When the conditioning period is judged to be completed (this may take several days for very impermeable specimens), make successive weighings daily or at 2-day intervals until a constant rate of gain is attained. This is best done by plotting the cumulative gain in weight in milligrams of each assembly against the elapsed time in the cabinet, until at least three, and preferably four, of the resulting points are in a straight line.

If the design of the cabinet is such that weighings cannot be made without removing the specimen, open the cabinet and preferably cover each dish with its correspondingly numbered cover, as it becomes accessible in the cabinet. Weigh each numbered dish with cover, in numerical sequence, on an analytical balance to the nearest 0.001 gram. Record the weight of each and replace them in the shelf of the cabinet, removing the covers as they are returned. If covers are used, they should be kept in a dust-free place, each preferably resting flat on three pointed supports. Note the time, and allow the specimen assemblies to remain in the cabinet for a suitable interval (approximately 24 hours or longer).

At the end of this period, note the time and again weigh each assembly with its corresponding cover in position in the same sequence as before, to the nearest 0.001 gram. Again replace them in the cabinet, removing the covers as they are returned, and note the time. Make successive weighings of the assemblies at suitable intervals until a constant rate of gain in weight is attained.

Note: The assemblies should be weighed in numerical sequence and replaced in the cabinet in the same order each time the weighings are made. Precisely the same routine and time schedule of weighing and replacing each test assembly must be followed in detail at each interval to minimize possible sources of error. If a detailed time schedule is arranged for making each weighing for each test assembly and carried out in an atmosphere of constant humidity, and if the identical procedure at each interval is followed, the use of covers or similar means for enclosing the test specimens is not essential.

Report

The water vapor permeability shall be reported as grams per square meter per 24 hours, at 100° F. and 90% vs. 5% relative humidity.

The calculation is preferably made as follows: Plot the gain of weight of the assembly in mgs. against the elapsed time in hours. Draw a straight line through the final points. Suppose the slope of the plotted straight line for a specimen is such that x mg. is gained over a period of y hours, and the exposed area

of the specimen is A sq. cm.; the water vapor permeability is then $240\ x/Ay$ grams per square meter per 24 hours.

Report the average, maximum and minimum values for each type of test made.

Record the results to the nearest two significant figures.

Reproducibility

Using different pieces of apparatus in different laboratories, the reproducibility of the method, if carefully followed, is expected to be within 20% of the mean, or 0.2 gram per square meter per day, whichever is the larger.

Additional Information

1. Because of the lower (and more controllable) high relative humidity selected in this method compared with several in current use (90% as against 95%) the results may be expected to be lower than those obtained using a relative humidity of 95%. However, unless the relative humidity is actually checked, cabinets designed for the higher humidity may actually have a relative humidity of not more than 90%, or even less, because the actual condition in several designs of cabinet in use depends largely on the surrounding temperature; for which reason, such cabinets should be operated in a room having a controlled temperature.

2. The use of a tare assembly is not advised because with impermeable specimens, its weight does not become constant for a very long time. An error may thus be introduced which is greater than any of the minor errors which its use obviates.

Literature Cited

1. Symington, F. S., and Burrows, R. F., *Fibre Containers* 28, No. 4: 107-109 (April, 1943).
2. Anon., *Modern Packaging* 16, No. 3: 78, 80, 82 (Nov., 1942).
3. Cartwright, L. C., *Tech. Assoc. Papers* 26: 55-56 (1942).
4. Dunmore, F. W., *J. Research Natl. Bur. Standards* 23: 701 (1939).

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Sears, G. R., Schlagenhauf, J. A., Givens, J. C., and Yett, F. R., "Comparison of Methods for the Determination of Water Vapor Permeability," *Paper Trade J.* 118, No. 3: 39-40 (Jan. 20, 1944).

Organizes Pigment Research Lab.

CAMBRIDGE, Mass., July 24, 1944—Alan R. Lukens, director of research for Thompson, Weinman & Co., Inc., for the last ten years, has left that concern, organized the Pigment Research Laboratory, and taken over the premises and part of the Thompson-Weinman equipment at 11 Windsor street. The laboratory is to be modernized and further equipped for the compounding of extender pigment for the paper, paint, rubber and allied fields. Research concerning measurement of Particle 5 distribution, surface phenomenon, and the effect of these upon various manufactures will be intensified, as also will be supervision of industrial research in technical schools and colleges.

Mr. Lukens is particularly engaged in evaluating pigments used in the paper, paint and rubber industries, calcium carbonates (whitings), clays, barytes, talcs and other extender pigments. Most of these materials have been evaluated by testing through a 325 mesh sieve. Nearly all of the material goes through the sieve. Anywhere from one-tenth of one per cent or more which remains on the screen has in the past been supposed to be a criterion of value. Inasmuch as the holes in the sieve are 44 microns, this test is obsolete, although rather often used. The Pigment Research Laboratory can make a complete Particle 5 distribution. This means the weight per cent of all sizes of particles down to less than one micron. Thus the user has a complete picture of what he is using. The alkalinity or acidity, the shape of the particles and the absorption of oil, casein, or paper sizing materials or chemical analysis can be made in these laboratories. Manufacturers of extender pigments who wish consultation advice are shown how to conduct manufacturing controls which will increase their production and insure the uniformity of their product. These services are equally applicable to tinctorial pigments as well as to extender pigments.

Mr. Lukens, when chief chemist of the Richards Company, Rockland, Ohio, was the inventor of the asphalt battery case, over 50,000,000 of which have been made under his patent. The colored slate granule, coated roofing and shingle, widely used for 20 years, were also developed under his direction. From 1926 until he joined Thompson, Weinman & Co., Inc., in 1934, Mr. Lukens was with the Hood Rubber Company.

K. S. Trowbridge to Join A.P.A.

T. W. Fernald, president of the American Pulpwood Association has announced that K. S. Trowbridge, formerly with the Brunswick Pulp and Paper Company, Brunswick, Ga., and now with the War Production Board as a Pulpwood Production Consultant, will shortly join the staff of the American Pulpwood Association as Logging Engineer. Mr. Trowbridge will, for the present, devote his time to a program recently initiated by the Association of improved logging technique through the mechanization of woods operations.

The necessity for mechanizing woods operations has long been known to industry members. The need was brought on by the necessity for increased production of pulpwood in the face of a dwindling labor supply. Some companies have already adopted, to varying degrees, mechanical means for producing wood. Power saws are replacing hand felling; tractors are taking the place of horses for skidding; and conveyor-type loaders replace hand loading of wood.

The purpose of the contemplated study by the American Pulpwood Association is to make known to all industry members, the type, operation, and availability of equipment which will give maximum production with minimum labor requirements, and results will be made available to all interested industry members.

Mr. Trowbridge will be available on a full-time basis the latter part of August, and will make his headquarters in the office of the American Pulpwood Association, 220 East Forty-second street, New York.

L. LaBrie Appointed to Technical Post

Laurent LaBrie, formerly chief of the OPA Heavy Chemicals Unit, has recently been appointed technical director of the Chicago plant of Paisley Products, Inc. It is reported that the thermoplastic coating divisions and the synthetic resin adhesives division of the company will be expanded and developed into the industrial research program of the starch and dextrine divisions of activity of the company.

Flammability of Treated Paper and Paperboard*

(Revision of TAPPI Suggested Method T 461 sm-43)

This method is applicable to papers and paperboards of all types, not over 1/16 inch thick, that have been treated to prevent the spread of flame when ignited. Such papers are commonly designated in the trade as "flameproofed," but in reality they are merely flame resistant to a more or less degree.

Apparatus

1. *Stopwatch.*
2. *Metal frame* designed to hold a specimen of paper 2.75 inches wide and 8.25 inches long by gripping ⅜ inch of each long edge in a clamp. The specimen with an area 2 by 8.25 inches thus exposed is held with the long axis in a vertical position.
3. *Test flame* is supplied by a Bunsen or Tirrill gas burner having a tube of ⅜ inch inside diameter.

Test Specimen

The test specimen shall consist of a piece of the sample 2.75 inches wide and 8.25 inches long. Specimens shall be cut in both principal directions of the sheet.

Procedure

Clamp the test specimen in the metal frame with the long axis in a vertical position. Adjust the test flame to a height of 1.5 inches with the air supply closed. Apply the test flame to the center of the lower edge of the test specimen, taking precaution to protect it from cross drafts, at a level that will make the distance from the top of the burner tube to the edge of the specimen 0.75 inch. Apply the test flame 12 seconds and then withdraw. Record with a stop watch the time of glow after withdrawal of the flame, and measure the height that is charred to the extent that it will separate readily when crumpled between the thumb and forefinger. Not less than three specimens shall be tested in each principal direction of the sheet.

Report

Results shall be reported as *char length,* which is the average maximum height of the charred or burned areas in inches, measured from the bottom edge of the piece to the nearest ⅛ or 0.1 inch; and as *after glow,* which is the average time in seconds that the specimens continue to glow after the burner flame is removed.

Additional Information

In general, papers which show a char length of over 4.5 inches, with the maximum char length of any one specimen over 5.5 inches, would not be considered sufficiently flame resistant to be effective. This statement, however, is not intended to set up a specification for flame-resistant papers *per se.*

The after-glow test often provides valuable additional information regarding the efficacy of the flame-resisting treatment.

* This revised method is suggested by the Paper Testing Committee as being most suitable to date. It is not however, a TAPPI Standard. Criticisms are earnestly requested and should be sent to R. G. Macdonald, Secretary, Technical Association of the Pulp and Paper Industry, 122 E. 42nd St., New York, N. Y. Reprints of this method may be obtained from the Secretary at 25 cents each.

Degree of Curl and Sizing of Paper*

TAPPI Tentative Standard T466 m-44

This method applies the principle of wetting one side of the paper and determining (*a*) the maximum curvature developed, or (*b*) the time required to reach maximum curvature. The maximum curvature is an indication of the relative tendency of certain papers, especially printing papers, to curl (*2, 3*). The time to reach maximum curvature is a measure of relative degree of sizing such as secured with rosin (*1*).

Apparatus

1. *Curl Tester.* The apparatus, shown in Fig. 1, consists of a float having near the center a rectangular wetting aperture about 2 inches long (perpendicular to plane of the figure) and a width, *L,* which is adjustable from zero to about 1 inch. A stop, *H,* is provided to hold one end of the curling specimen at a fixed angle, *F,* with respect to the horizontal. A scale with stippled surface, graduated in degrees, is fastened to the float to indicate the movement of the pointed end of the curling specimen.

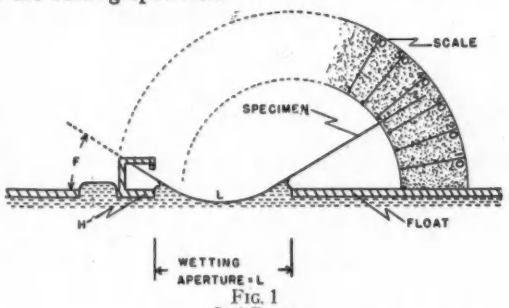

FIG. 1
Curl Tester

This method has been approved as a tentative standard by the Paper Testing Committee. Criticisms are earnestly requested and should be sent to R. G. Macdonald, Secretary, Technical Association of the Pulp and Paper Industry, 122 E. 42nd St., New York, N. Y. Reprints of this standard may be obtained from the Secretary at 25 cents each.

2. A *stopwatch* or other suitable timing device is required for testing degree of sizing.

3. A *vessel of water* of fair purity, such as drinking water, at 23 ±2° C.

Test Specimen

Cut the specimens in the shape of a right trapezoid having an altitude of 1.5 inches in the machine direction and bases of 1.5 and 2.75 inches extending in the cross direction (*2*). Condition them before testing according to TAPPI Standard T 402 m.

Procedure

The tests shall be made in an atmosphere conditioned according to TAPPI Standard T 402 m.

(*a*) Degree of Curl

Put the float on the water, place the square end of the trapezoidal specimen under the stop with the longest, pointed side next to the scale, and allow the specimen to fall across the aperture and become wet over that area. Read the scale angle reached by the point of the specimen at the instant the direction of curling reverses. If this angle is less than 30 or more than 60°, adjust the width of the aperture until the angle lies within the desired range. In general, if the curve of the specimen departs noticeably from a circular cylindrical surface, reduce the width, in the cross direction, of the wetted portion of the specimen until the curve is substantially circular. Test in this way at least five specimens from each side of the paper. Add the average scale angle to the fixed angle (about 30°) which the square end of the specimen makes with the horizontal. Divide this sum by the width in centimeters of the aperture used (length of arc of wetted, curled portion of specimen in cross direction). The result is the maximum curvature in degrees per centimeter of arc.

(*b*) Degree of Sizing

Affix the specimen in the apparatus as described in (*a*). Determine the time from contact of the specimen with the water until the maximum curvature is reached, that is, until the point of the specimen reverses its direction of movement. For this test it is preferable to adjust the width of the aperture so that maximum curvature is reached near the middle of the scale. Test at least five specimens for each side of the paper.

Report

(*a*) Report as Degree of Curl the average value and the range of maximum curvature, in degrees per centimeter.

(*b*) Report as Degree of Sizing (Curl Test) the average value and the range of time in seconds to reach maximum curvature.

Additional Information

The factors out of which curling troubles grow are many and complex. It is therefore necessary to use caution in interpreting curling data obtained by this test in connection with certain types of curling troubles. A high curl test does not necessarily mean that the paper will, in every case, curl in practise.

A somewhat more precise measurement of curling tendency can be made by using a narrow rectangular specimen and measuring the displacement of the chord by means of a suitably mounted lens and index line (*3*). A fairly good estimate of curling tendency can also be made by floating rectangular specimens of known width (cross direction) on water and estimating the maximum height of rise of the edges above the center, from which the minimum radius of curvature can be found by a graphical solution. Or, two fine wires may be stuck with wax to the edges perpendicular to the paper so that as the specimen curls they cross at the center of curvature. The minimum radius of curvature can then be estimated. The maximum curvature in degrees per centimeter is 57.3 divided by the minimum radius of curvature in centimeters. In either case the specimen should be narrow enough (in the cross section) so that all of the under side will remain in contact with the water at maximum curl.

An approximate comparison of the degree of sizing of papers of different thicknesses can be calculated by dividing the time of curl by the square of the thickness of the papers.

The Curl Sizing Tester is available for testing both the degree of curl and the degree of sizing (*1, 2*). For the latter purpose, the apparatus contains a built-in stopwatch which starts automatically when the specimen is lowered to the water.

Literature Cited

1. Carson F. T., *Paper Trade J.* 79, No. 17; 44 (Oct. 23, 1924).
2. Carson, F. T., and Worthington, V., *Paper Ind.* 22; 246 (June 1940).
3. Carson, F. T., and Worthington, V., *Natl. Bur. Standards J. Research* 30; 113, Research Paper RP1522 (1943).

Capt. Kittay with National Starch

National Starch Products Inc. announces the appointment of Capt. E. Kittay as manager of its Southern Division, with headquarters in Houston, Tex.

Prior to his enlistment in the U. S. Army, he was for 13 years with National Adhesive Corporation (now a division of National Starch Products) serving customers in the metropolitan New York area. He is a graduate of Harvard, and possesses a thorough technical background as well as broad practical experience. He will coordinate company activity in the Southern territory, extending from Texas east to Florida, and will operate from a district office at 1201 Commerce avenue, Houston, where emergency stocks will be maintained for the convenience of customers.

Capt. Kittay has returned to National after two years in Service, first as Chemical Officer in the Trinidad Sector and Base Command, and later as Commanding Officer of the Chemical Section of the Trinidad General Depot. Before going overseas, he was stationed at the office of the Chief of Chemical Warfare Service Chemical and Rubber Section, Industrial Division, Washington, D. C.

Howard H. Dana Made Field Director

Boston, Mass., July 24, 1944—Howard H. Dana, formerly with the S. D. Warren Company at Westbrook, Me., has become New England field director for the Committee for Economic Development, making his headquarters in the New England Council's offices, Statler Building. Mr. Dana replaces Wallace C. Richardson, Jr., of Newton, Conn., who has held that position since November, 1942. Mr. Richardson has resigned to take a position with *Life Magazine* in New York City. Before coming with the CED, Mr. Richardson was connected with the advertising business both in Connecticut and Detroit.

SUCCESS starts with careful planning. When you select a new plant site, be sure to plan carefully.

For years our Industrial Department has assisted many industries in their plant location problems. Let us help you.

Your inquiry will receive prompt and confidential attention.

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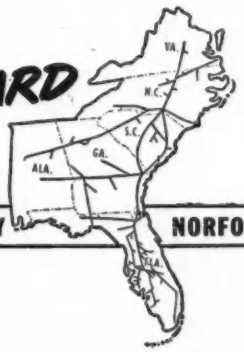

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DALLAS T. DAILY, GENERAL INDUSTRIAL AGENT, SEABOARD RAILWAY NORFOLK 10, VIRGINIA

To the Machine Tender

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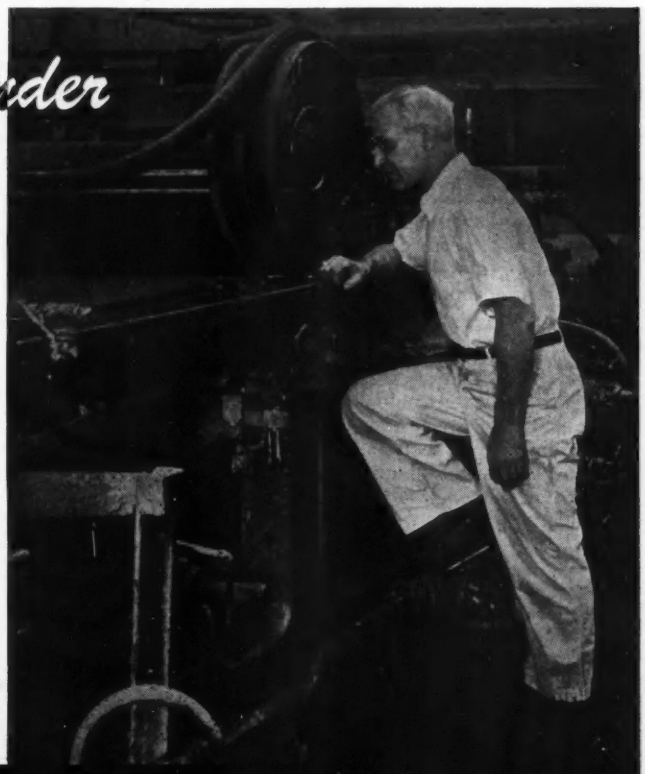
APPLETON, WIS.



Appleton Wires are Good wires

New York Paper and Pulp Market Review

Heavy Military Requirements Limit Paper Output For Civilians—More Pulp Going Into Paper and Board For Military Use In Current Quarter — Waste Paper Collections Are Slightly Higher.

Office of the PAPER TRADE JOURNAL.
Wednesday, July 26, 1944.

Little change from the current tight supply situation in major paper items is expected by a large segment of the industry and trade at this date. Cut backs to provide more paper for the trade are not likely to amount to much until the war has progressed further. Preliminary news on last quarter pulp allocations and authorized use in the production of paper, do not indicate much change will be possible, as war requirements are extremely heavy. Many reports concerning the above aspects in the current situation, have been received this week from many manufacturers' representatives, jobbers, and general paper merchants. All reports reflect concern regarding the tightness of all paper items relative to active demand.

Paper production for the week ended July 15 was estimated at 91.1%, compared with 90.2% for 1943, with 81.5% for 1942, with 100.7% for 1941, and with 91.3% for the corresponding week for 1940.

Paper board production for the week ended July 15 was 91.0%, compared with 92.0% for 1943, with 71.0% for 1942, with 92.0% for 1941, and with 77.0% for the corresponding week for 1940.

Wood Pulp

Production of wood pulp for the first five months of 1944 was about 6% above the same period in 1943. In the total production of 4,118,000 tons, compared with a total output of 3,903,000 tons in the like period in 1943, non-paper grades showed a decrease this year of 13.8%, compared with a decrease of 3.3% in the papermaking grades of pulp. In the current quarter, the Department of Commerce reports, of the allocation of 2,617,000 tons of wood pulp for paper and paper board, the tonnage will be directed on a preferred basis to about 60 grades of paper and paper board of particular importance to the war program.

Rags

Demand for new cotton cuttings in all grades is active. The market is strong under an increasing demand as wood pulp becomes more difficult to obtain. Prices are firm at ceiling levels.

Trading in old cotton rags is active. All grades are in good, steady demand. The roofing grades are particularly strong. Prices on all grades are firm at ceilings.

Old Rope and Bagging

No important change in the old rope market has been reported this week. Demand for all grades of fiber is active. Prices are firm at ceilings.

Demand for scrap bagging and gunny continues limited. No change in the market has occurred this week. Prices are still soft and continue nominal.

Old Waste Paper

Mill demand for waste paper continues urgent. The salvage situation is improving slowly and Boy Scout organizations are scheduled to begin a special drive for more waste paper, starting in September. Mill receipts of paper stock in the first five months of 1944 totaled 2,938,000 tons, compared with 2,470,000 tons in the same period in 1943. Consumption for the period was 2,907,000 tons, compared with 2,470,000 tons in 1943. Inventories for the five-month period aggregated 288,000 tons, compared with 433,000 tons in 1943.

Twine

No important change in the twine and cordgage markets has occurred this week. Demand for all fibers is active. Prices are firmly maintained by a steady demand at prevailing levels.

Hooker Gets Third Award

The Hooker Electrochemical Company of Niagara Falls, N. Y., has been awarded a third star for their Army-Navy "E" Flag, in recognition of their continued excellence in the production of materials for the War Department. This award was used as a stimulus to promote the success of the Fifth War Loan Drive, and in connection with these activities an exhibit of Hooker Products and the part they are playing in the war effort was erected on the company plaza.

This display indicated how Hooker chemicals enter every phase of the war effort by showing the Hooker chemicals and the industrial products obtained from them. From this exhibit workers were able to see that the work they are doing daily at the Hooker plant is instrumental in supplying our armed forces with the fuel for their motorized equipment, self-sealing gas tanks, and other synthetic rubber products, clothing, medicines and drugs, insecticides, and hundreds of other needed items that are dependent for their production on Hooker chemicals.

Bulkley, Dunton Man Decorated

Lt. George C. Arnold, who before enlisting in the Army was on the staff of the Bulkley, Dunton Pulp Company is now holder of the Distinguished Flying Cross and the Air Medal with three Oak Leaf Clusters.

According to a press release issued by the Headquarters of the United States Strategic Air Forces in Europe, "Lt. Arnold was flying over France, Germany and other enemy-occupied European countries and helped to extend the ground already gained on the Continent by seeking out enemy aircraft and engaging them in combat by providing escort protection for heavy bombers, by bombing and strafing ground installations, convoys and other targets, and by providing cover for Allied troops.

"For extraordinary achievement and heroism in aerial combat, Lt. Arnold has been decorated with the Distinguished Flying Cross and the Air Medal with three Oak Leaf Clusters. A cluster signifies an award equal to another Air Medal."

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You can avoid time-consuming drilling when cleaning rubber covered suction press rolls by using either one of THREE safe, effective Oakite techniques specially developed for this work. Your nearby Oakite Technical Service Representative will gladly suggest the method best suited to your particular plant conditions. No matter which procedure is employed, removal of deposits is FAST, efficient, thorough.

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Aktivin S is a stable white powder, a mild oxidizing agent which liquefies starch without forming dextrine and sugar. This means a considerable saving of starch. Aktivin S is very simple to use. Merely add 1% of Aktivin S to the starch and boil with live steam until desired viscosity is obtained. Aktivin S is not an enzyme. Literature and sample upon request.

THE AKTIVIN CORPORATION
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Sometimes small things make lots of trouble. Could your machinery be changed a little to save a lot of work? Write and tell us what we can do to help. Or a *Union* representative will be glad to call.

UNION MACHINE COMPANY
FITCHBURG, MASS.
(Associated with Union Screen Plate Company)

MISCELLANEOUS MARKETS

Office of the PAPER TRADE JOURNAL.
Wednesday, July 26, 1944.

BLANC FIXE—Prices on blanc fixe reflect no change from prevailing quotations. Demand is reported fair. The pulp is quoted at $40 per ton, in barrels, at works. The powder is quoted at $60 per ton, f.o.b. works.

BLEACHING POWDER—Over-all demand is reported heavy. Production is heavy and the balance between supply and demand is reported satisfactory. Quotations are unchanged. Bleaching powder is currently quoted at from $2.50 to $3.10 per 100 pounds. All prices in drums, car lots, f.o.b. works.

CASEIN—OPA maximum prices on processed acid-precipitated casein are as follows: 10,000 pounds or more, 24 cents per pound; 2,000 pounds, 24¼ cents per pound; less than 2,000 pounds, 23¾ cents per pound f.o.b. shipping point.

CAUSTIC SODA—Demand heavy. Deliveries are improving. Market tight. Prices unchanged. Solid and flake scarce. Solid caustic soda is currently quoted at $2.30 per 100 pounds. The flake and ground are currently quoted at $2.70 per 100 pounds. All prices in drums, car lots, f.o.b. works.

CHINA CLAY—Current demand is reported moderate on many grades of china clay. Quotations unchanged. Domestic filler clay is quoted at from $7.50 to $15 per ton; coating clay is quoted at from $12 to $22 per ton, at mines. Imported china clay is currently quoted at from $13 to $25 per long ton, ship side.

CHLORINE—Demand heavier with market reported definitely tight at this date. Chlorine is currently quoted at $1.75 per 100 pounds, in single-unit tank cars, f.o.b. works.

ROSIN—The rosin market reports lower prices on some grades this week. "G" gum rosin is currently quoted at $5.42 per 100 pounds, in barrels, at Savannah. "FF" rosin is currently quoted at $5.40 per 100 pounds, in barrels, at New York. Seventy per cent gum rosin size is currently quoted at $5.69 per 100 pounds, f.o.b. works.

SALT CAKE—Prices on salt cake continue to be reported unchanged. Demand relatively low during the current week. Domestic salt cake is currently quoted at $15 per ton, in bulk. Chrome cake is currently quoted at $16 per ton. All quoted prices in car lots, f.o.b. shipping point.

SODA ASH—Demand for soda ash is reported at little less heavy at this date. Mark tight. Prices continue to conform to prevailing levels. Quotations on soda ash in car lots, per 100 pounds, are as follows: in bulk, $.90; in paper bags, $1.05; and in barrels, $1.35.

STARCH—Corn available for trade consumption is reported larger at this date. Over-all demand continues very heavy and in excess of available supplies. Prices unchanged on starch. Pearl is quoted at $3.72 per 100 pounds. Powdered starch is quoted at $3.83 per 100 pounds. All prices in bags, car lots f.o.b. Chicago.

SULPHATE OF ALUMINA—Demand good. Supply situation is reported satisfactory for the week. Prices of the commercial grades are currently quoted at from $1.15 to $1.25 per 100 pounds. The iron free is curently quoted at $1.85 per 100 pounds. All prices in bags, car lots, f.o.b. works.

SULPHUR—Current consumption of sulphur continues heavy. Market situation unchanged. The quotation on annual contracts continues at $16 per long ton, f.o.b. mines. The current price on contracts at Gulf Ports is $17.50 per long ton.

TALC—Demand reported moderate. Domestic grades are currently quoted at from $16 to $21 per ton at works.

MARKET QUOTATIONS

All market quotations, excepting those otherwise designated as official OPA maximum prices, are based on the manufacturers' price level as of October 1-15, 1941; maximum wholesale prices are based on the merchants' maximum prices for stipulated quantities at a quoted price to all customers of a like class, as shown by the merchant's sales records of goods delivered during March, 1942. A merchant's price list in effect in March 1942, showing quotations of actual shipments, will establish the current maximum prices.

Paper

(Delivered New York)

Standard News, per ton—			
Roll, contract...	*$58.00	@	—
Sheets	66.00	"	—
* OPA Maximum Price.			
Kraft—per cwt.—Carload Quantities Zone A, f.o.b. Mill			
Superstandard Wrapping ....|	*$5.25	@	—
No. 1 Wrapping...	*5.00	"	—
Standard Wrapping	*4.75	"	—
Standard Bag.....	*4.375	"	—
* OPA Manufacturers' Prices.			
Tissues—Per Ream—Carlots			
White No. 1.....	1.12½	"	—
White No. 1 M. G.	1.10	"	—
White No. 1½....	1.00	"	—
White No. 2.....	.90	"	—
Anti-Tarnish M.F..	1.20	"	—
Colored	—	"	—
Kraft	.95	"	—
Manila	.90	"	—
Toilet—1 M. Sheets—Per Case			
Unbleached	4.25	"	—
Bleached	5.70	"	—
Unbl. Toilet, 1 M.	4.16	"	—
Bleached Toilet....	5.70	"	—
Paper Towels, Per Case—			
Unbleached, Jr.....	2.20	"	—
Bleached, Jr.	3.20	"	—
Manila—per cwt.—C. l. f. a.			
No. 1 Jute.....	11.25	@	—
No. 1 Manila Wrapping, 35 lb....	6.00	"	6.25
No. 2 Manila Wrapping, 35 lb.....	5.75	"	6.00
Boards, per ton—			
News	*48.00	@	—
Chip	*48.00	"	—
Sgl. Mla. L1. Chip	*60.00	"	—
White Pat. Coated	*75.00	"	—
Kraft Liners 50 lb.	*63.00	"	—
Binders Boards...	84.00	"	116.00

* OPA Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5.; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following are representative of distributors' resale prices:

Rag Content Bonds and Ledgers—White, Assorted Items, Delivered in Zone 1:

	Bonds	Ledgers
100% Rag Ext. No. 1	$39.10@$46.00	$40.25@$47.25
100% Rag	32.20 " 37.75	33.35 " 39.25
85% Rag	.... "	29.90 " 35.00
75% Rag	23.00 " 27.00	24.15 " 28.25
65% Rag	.... "	22.80 " 27.75
50% Rag	18.70 " 22.75	19.90 " 24.25
25% Rag	16.40 " 20.00	17.55 " 21.50

Colors at $1.00 cwt. extra.

Sulphite Bonds and Ledgers—White, Assorted Items. Delivered in Zone 1:

	Bonds	Ledgers
No. 1..	$10.55@$12.75	$11.70@$14.25
No. 2..	9.65 " 11.75	10.80 " 13.25
No. 3..	9.20 " 11.25	10.35 " 12.50
No. 4..	8.90 " 10.75	10.05 " 12.25

Colors $1.00 cwt. extra.

Free Sheet Book Papers—White, Cased Paper. Delivered in Zone 1:

No. 1 Glossy Coated...	$13.65	@	$15.50
No. 2 Glossy Coated...	12.40	"	14.00
No. 3 Glossy Coated...	11.60	"	13.25
No. 4 Glossy Coated...	11.15	"	12.75
No. 1 Antique (watermarked)	10.25	"	11.75
No. 2 Offset	9.60	"	11.00
A Grade E. F.....	9.35	"	10.75
A Grade S. & S. C...	9.60	"	11.00
B Grade E. F.	8.85	"	10.25
B Grade S. C.	9.10	"	10.50
C Grade E. F.	8.55	"	9.75
C Grade S. C.	8.80	"	10.00
D Grade E. F.	8.25	"	9.50
D Grade S. & S. C. ..	8.50	"	9.75

Ivory & India at $.50 cwt. extra.

Wood Pulp

OPA Maximum Prices and Canadian Manufacturers Prices, Less Freight Not Exceeding OPA Allowances.

Bl. Softwood Sulphite.....	$86.00
Unbl. Softwood Sulphite.....	74.00
Bl. Hardwood Sulphite.....	83.50
Unbl. Hardwood Sulphite.....	71.50
Bl. Mitscherlich	81.00
Unbl. Mitscherlich ..72.00 @	82.00
N. Bleached Sulphate	86.00
S. Bleached Sulphate	79.00
N. Semi-Bleached Sulphate...	82.00
S. Semi Bleached Sulphate...	75.00
N. Unbl. Sulphate.....	73.00
S. Unbl. Sulphate	63.50
Bl. Soda	72.00
Unbl. Soda	68.00
Groundwood	50.00

Transportation Allowances

Applying to Producers of Wet Wood Pulp.

	Below 50% Air Dry Weight
Northeast	$13.50
Lake Central	13.50
Southern	16.00
West Coast (in area).....	10.50
West Coast (out area).....	16.50

	50%-80% Air Dry Weight
Northeast	11.50
Lake Central	11.50
Southern	14.00
West Coast (in area).....	9.50
West Coast (out area).....	15.50

Applying to Producers of Dry Wood Pulp.

	Above 80% Air Dry Weight
Northeast	$8.50
Lake Central	8.50
Southern	11.00
West Coast (in area)	7.50
West Coast (out area)	13.50

Should freight charges actually exceed these allowances, the difference may be added to the maximum prices.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1..	6.50	@	7.25*
Silesias No. 1.....	—	"	5.75*
New Unbleached...	6.75	"	7.50*
Blue Overall	—	"	5.50*
Fancy	—	"	3.50*
Washables	—	"	3.00*
Bleached Khaki Cuttings	—	"	4.25*
Unbleached Khaki Cuttings	—	"	3.50*

* OPA Maximum Prices.

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KLEMP STEEL WELDED & RIVETED GRATINGS

Rugged construction. Open to light and air. *Practically maintenance free.* For Platforms, Walkways, Bridges, Decks, Catwalks, Boiler and Engine Rooms, Stair Treads, etc.

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Shows Klemp Hexteel and Floorsteel Surface Armors, Steel Stair Treads, Flexible Steel Safety Mats. Wire or write.

Special Representative

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KLEMP WELDED

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KLEMP RIVETED

Truss construction for maximum strength.

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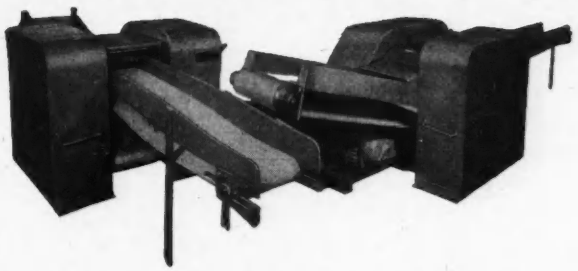

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These fine machines have a great margin of power and strength that assures many years of service under severe conditions of use.

Accidental proof of this plus strength was afforded when a steel bar 1½ inches in diameter went through one of these machines recently without damage to the cutter. Only a part of the knives had to be replaced.

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PRICE & PIERCE »»»»»»»»ltd•

Wood Pulp & Paper Agents

60 East 42 Street
New York, N. Y.

Old Rags

White, No. 1—			
Repacked	*3.80	@	—
Miscellaneous	*3.20	@	—
White, No. 2—			
Repacked	*2.90	"	—
Miscellaneous	*2.65	"	—
Third and Blues—			
Repacked	*2.20	"	—
Miscellaneous	*1.80	"	—
Roofing Rags—			
No. 1	*1.55	"	—
No. 2	*1.45	"	—
No. 3 (bagging)	*1.35	"	—
No. 4	*1.35	"	—
No. 5A	*1.35	"	—
Old Manila Rope	5.75	"	—

OPA Maximum Prices.

Foreign Rags

All Prices nominal

New Rags

New Dark Cuttings	2.25	@	2.40
New Mixed Cuttings	2.00	"	2.20
New Light Silesias	5.50	"	5.75
Light Flannelettes	5.50	"	5.75
New White Cuttings	7.00	"	7.50
New Light Oxfords	4.00	"	4.50
New Light Prints	3.00	"	3.25

Old Rags

No. 1 White Linens	7.50	"	8.50
No. 2 White Linens	6.50	"	7.50
No. 3 White Linens	4.50	"	—
No. 4 White Linens	2.25	"	3.25
No. 1 White Cotton	4.25	"	4.75
No. 2 White Cotton	3.25	"	3.75
No. 3 White Cotton	2.50	"	3.00
No. 4 White Cotton	1.90	"	2.20
Extra Light Prints	2.00	"	2.40
Ord. Light Prints	1.75	"	2.15
Med. Light Prints	1.55	"	1.95
Dutch Blue Cottons	2.25	"	2.50
French Blue Linens	3.00	"	—
Checks and Blues	2.00	"	—
Linsey Garments	1.90	"	2.00
Dark Cottons	1.50	"	1.60
Old Shopperies	1.30	"	1.45
New Shopperies	1.45	"	1.50
French Blues	2.25	"	2.50

BAGGING

(Prices to Mill, f. o. b. N. Y.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	4.25	@	4.35
Wool Tares, light	4.25	"	4.50
Wool Tares heavy	4.50	"	5.00
Bright Bagging	4.50	"	4.85
Manila Rope—			
Foreign	—	"	—
Domestic	*5.75	"	—
Jute Threads	5.50	"	—
No. 1 Sisal Strings	*4.00	"	—
Mixed Strings	2.00	"	—

* OPA Maximum Price.

Old Waste Papers

(F. o. b. New York)

OPA Maximum Prices, Baled

No. 1 Hard White Envelope Cuts, one cut	3.37½	@	—
No. 1 Hard White Envelope Cuts	3.12½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, one cut	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Mixed Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
Mixed Groundwood Colored Shavings	.90	"	—
Overissue Magazines	1.67½	"	—
No. 1 Heavy Books & Magazines	1.92½	"	—
Mixed Books	1.10	"	—
No. 1 White Ledger	2.30	"	—
No. 2 Mixed Ledger, colored	2.00	"	—
New Manila Envelope Cuttings, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
Extra Manilas	1.95	"	—
Mixed Kraft, Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
Triple Sorted, No. 1 Brown Soft Kraft	2.50	"	—
New 100% Kraft Corrugated Cuttings	2.25	"	—
No. 1 Assorted Old Kraft	1.75	"	—
New Jute Corrugated Cuttings	.90	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.40	"	—
Box Board Cuttings	.72½	"	—
White Blank News	1.65	"	—
Overissue News	1.10	"	—
No. 1 News	1.00	"	—
No. 1 Mixed Paper	.95	"	—
Old Corrugated Containers	.82½	"	—
Mill Wrappers	1.10	"	—

Twines

All Prices Nominal

(F. o. b. Mill)

(Soft Fiber)

Coarse Polished—			
India	.21	@	—
White Hemp	.21	"	—
Fine Polished—			
Fine India	.26	"	—
Unpolished—			
Box	.17½	"	—
Paper Makers	.17	"	—
Tube Rope	.19	"	—
Wall Paper	.20½	"	—
Wrapping	.23	"	—
Soft Fiber Rope	.19	"	—
Cotton	.25	"	—

(Hard Fiber)

Medium Java	.18	"	—
Mex. Sisal	.16	"	—
Manila	—	"	—

PHILADELPHIA

Domestic Rags (New)

(Price to Mill.)

Shirt Cuttings—	
New White No. 1	.07¼
New White No. 2	.05¾
Light Silesias	.05¾
Black Silesias, soft	.03¾
New Unbleached	.07½
Washable Prints	.04¼
Washable No. 1	.03
Blue Overall	.05½
Cottons—According to grades—	
Washable shredding	.01¾
Fancy Percales	.04¾
New Black Soft	.03¼
Khaki Cuttings—	
Unbleachable Cotton Cuttings	.03½
Bleachable Cotton Cuttings	.04¼
Men's Corduroy	.03½
Ladies' Corduroy	.03
Cottonades	.03¼

Domestic Rags (Old)

White No. 1—Repacked	3.80	"	—
Miscellaneous No. 1	3.20	"	—
Miscellaneous No. 2	2.65	"	—
White No. 2 Repacked	2.90	"	—
Thirds and Blues—			
Miscellaneous	1.80	"	—
Repacked	2.20	"	—
Black Stockings—			
(Export)	Nominal		
Roofing Stock—			
Foreign No. 1	Nominal		
Domestic No. 1	1.55	"	—
Domestic No. 2	1.45	"	—
Roofing Bagging	1.35	"	—
Old Manila Rope	5.75	"	—

Bagging

(F. o. b. Phila.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	3.00	"	3.50
No. 1 Clean bright—			
Sisal Strings			.04
No. 2 Clean bright—			
Sisal Strings			.03
Sisal Jute	.02½	"	.02¾
Scrap—			
No. 1	3.25	"	3.50
No. 2	1.75	"	1.80
Wool Tares heavy	4.00	"	4.25
No. 1 New Light Burlap	3.00	"	4.00
New Burlap Cuttings	3.75	"	4.00

Old Papers

(F. o. b. Phila)

OPA Maximum Prices, Baled

No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
Soft White Shavings, one cut	2.50	"	—
White Blank News	1.65	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.92½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White and Colored Tabulating Cards	2.25	"	—
Ground Wood Tabulating Cards	1.35	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.95	"	—
Overissue News	1.10	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.40	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	—	@	2.75
Sisal Rope No. 1	*4.75	"	—
Sisal Rope No. 2	*4.25	"	—
Mixed Rope	—	"	1.55
Transmission Rope—			
Foreign	(nominal)		
Domestic	2.75	"	3.00
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	—
Soft Jute Rope	5.25	"	—
Jute Carpet Threads	3.00	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	—	"	2.50
South American	—	"	3.00

BOSTON

Old Papers

(F. o. b. Boston)

OPA Maximum Prices, Baled

No. 1 Hard White Shavings, unruled	2.87½	@	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.92½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White and Colored Tabulating Cards	2.25	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.95	"	—
Overissue News	1.10	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.40	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	—	@	2.75
Sisal Rope No. 1	*4.75	"	—
Sisal Rope No. 2	*4.25	"	—
Mixed Rope	—	"	1.55
Transmission Rope—			
Foreign	(nominal)		
Domestic	2.75	"	3.00
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	—
Soft Jute Rope	5.25	"	—
Jute Carpet Threads	3.00	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	—	"	2.50
South American	—	"	3.00
Wool Tares—			
Foreign	(nominal)		
Domestic	4.25	"	
Aust. Wool Pouches	—	"	3.25
New Zealand Wool Pouches	—	"	3.50
New Burlap Cuttings	4.75	"	5.00
Heavy Baling Bagging	4.00	"	4.25
Paper Mill Bagging	2.50	"	3.00
No. 2 Roofing Bagging	1.35	"	—

* OPA Maximum Price.

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.04½	@	.04¾
Fancy Percales	.04¼	"	.05
New White No 1	.06¾	"	.07
New Light Flannelettes	.05½	"	.06
Canton Flannels, Bleached	.06	"	.06½
Underwear Cutters, Bleached	.06¼	"	06¾
Underwear Cutters, Unbleached	.05¾	"	.06
Silesias No. 1	.06	"	.06¼
New Black Silesias	.03	"	.03½
Red Cotton Cuttings	.03½	"	.04
Soft Unbleached	.06½	"	.06¾
Blue Cheviots	.05½	"	.06
Fancy	.02¾	"	—
Washable	.02¾	"	—
Khaki Cuttings	.02¾	"	.03
O. D. Khaki	.03½	"	.03¾
Corduroy	.03¾	"	.03¼
New Canvas	.06¼	"	.06¾
B. V. D. Cuttings	.06¼	"	.06¾

Domestic Rags (Old)

(F. o. b. Boston)

White No. 1—			
Repacked	3.80	@	—
Miscellaneous	3.20	"	—
White No. 2—			
Miscellaneous	2.65	"	—
Twos and Blues, Repacked	2.20	"	—
Old Blue Overalls	2.25	"	2.30
Thirds and Blues, Repacked	2.20	"	—
Miscellaneous	1.80	"	—
Black Stockings	3.50	"	4.00
Roofing Stock—			
No. 1	1.55	"	—
No. 2	1.45	"	—
No. 3	1.35	"	—
No. 4	1.35	"	—
No. 5, Quality A	1.35	"	—
Quality B	1.20	"	—
Quality C	.95	"	—
* Old Manila Rope	5.75	"	

* OPA Maximum Prices.

Foreign Rags

(F. o. b Boston)

Canvas	(nominal)
Dark Cottons	(nominal)
Dutch Blues	(nominal)
New Checks and Blues	(nominal)
Old Fustians	(nominal)
Old Linsey Garments	(nominal)
New Silesias	(nominal)

CHICAGO

Waste Paper

(F. o. b. Chicago)

OPA Maximum Prices, Baled

Shavings—			
No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
No. 1 White Ledger	2.30	"	—
No. 1 Heavy Books & Magazines	1.92½	"	—
White Blank News	1.65	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
No. 1 Assorted Old Kraft	1.75	"	—
Overissue News	1.10	"	—
No. 1 News	1.00	"	—
No. 1 Mixed Paper	.95	"	—
No. 1 Kraft Bags	1.25	"	—
No. 1 Roofing Bags	1.45	"	—